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*DIET to suit yourself*

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# DIET

*To Suit Yourself*

by  
WALTER ROSS



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## PART ONE

# A NEW KIND OF DIET

### *1. A New Kind of Diet*

It is difficult to decide which is the bigger threat to our health—overweight, which many of the medical profession regard as our “number one health problem”, or the diets we attempt and the pills we take to try to reduce.

It is certainly true that a great number of us are somewhat overweight. It is also true that excess fat shortens life and encourages disease and disability. A large percentage of the citizens in this country are truly overweight by medical standards.

It is also, unfortunately, true that these facts have been seized upon by a variety of unscrupulous people who have used segments of the truth, combined, in many cases, with half-truths or deliberate distortions, to foist upon the public anything from quack health diets to dangerous “reducing” pills. The net effect has been to create even more excess fat among the overweight and, at the same time, to cause a great deal of dangerous underweight and poor feeding among young women and teen-age girls.

This book does not merely set out to expose the harm that is being done in the name of dieting, but is designed to avoid the dangers of incorrect reducing, and to show those who are overweight *and* those who are underweight the relationship between sensible eating and good health.

It offers practical help to those who wish to reduce, and it proves that there is a way of doing so which does not entail selling them anything, neither need they starve themselves.

This method has been called, deliberately, “Diet To Suit Yourself”. You will find that this is an accurate description of our new approach to the problem.

Use of the word “diet” in our title is no accident. It was chosen deliberately, and based on medical evidence. Today, more than ever, doctors are united in agreeing that fat comes only from food—even



in the tiny number of cases in which overweight is linked with glandular troubles—and that the only way to lose weight is by dieting.

Now that this has been said, let us forget any previous ideas about the meaning of the word "diet". Let us not think of those disastrous "Seven-day Diets", or "Ten-day Diets", or "Twenty-one-day Diets", or, in fact, any diet that has to do with some apparently magic number of days. Your body is not interested in this kind of mathematics, but in something far more basic. Nor does your body take kindly to diets which are built round other types of "magic" such as "Lettuce Diets", or "Banana Diets", or "Bread-and-Butter Diets", or "Fat Diets", or "All-Meat Diets".

What your body *is* interested in is a balanced diet and a sufficient diet. The minimum balance is known for everyone; and so is the minimum deficiency. There is no mystery about either, as we shall see, and neither has anything to do with a magic number of days or a magic kind of food.

All food contains two things: calories and nutrients. It is generally impossible to eat one without the other, and therefore it is impossible to talk about one without the other, except for the purposes of definition. It is certainly impossible to construct a sound diet without taking both into consideration.

Trying to create an artificial separation between calories and nutrients, or treating overweight as if it were the only problem connected with eating, is responsible for a great many poor diets and ill health.

In showing you how to diet to suit yourself, this book will not suggest separating calories from nutrients, but will show you how to get your fair share of both.

## *2. Why Do You Overeat?*

EATING is as easy as putting food into your mouth and as complicated as your bodily chemistry. And it is much more than these, for both are merely mechanical aspects of eating. Eating is also social, it is an economic problem (bringing home the bacon!), it is sensual experience, a habit. And since eating is the necessary prerequisite to overweight, it is obvious that overeating is no simple problem. Neither is dieting, unless you understand why you overeat.

If diet, alone, were all there was to losing weight, there would no longer be any problem of excess pounds. There have been literally hundreds of diets devised by everyone from quacks to highly qualified medical men; yet we, as a nation, keep piling on the pounds.

There is a woman in Boston whose kitchen seems to flutter when you walk in. That is because the walls are covered with every diet you ever heard of and many more you have never seen. The woman has tried them all. Yet she is still fat. Why?

Her explanation is: "I have no will-power. I try a new diet. I stick to it for a few days. Then I look at the food in my larder, and I start eating!"

Her problem is different from, but related to, that of another middle-aged housewife whose son, a teen-ager, tends to be "difficult". If he goes out in the evening, and fails to return at a reasonable hour, her maternal fears assert themselves. Then, instead of trying to find her son, or just waiting quietly for him to return, she sits down with a cup of tea "to calm my nerves". With the tea she will nibble at a tin of biscuits, and will continue nibbling until her son comes home and is safely in bed.

Then there is a well-known man in the theatrical world who is tremendously fat. Yet he eats far more than he needs merely to satisfy his hunger. His friends know that he can be goaded into overeating just by the sight of food—but even more so by the mention of some other, more successful actor. Just a reference to a real top-liner is enough to make our large friend begin eating as though each mouthful were vital to his very existence.

One could go on and on with such pitiful cases, but these are typical enough to prove the point. Modern medicine is convinced that overeating is, among other things, an emotional problem. With some people, emotional conflicts are strong enough to create a real neurosis. For these unfortunate folk, no diet, not even under strict supervision, can really bring about any permanent weight loss. Only psychotherapy—which might take a great deal of time and money—can solve their problem.

According to one medical authority, the background of voracious eaters is generally one of deprivation. Usually emotional deprivation. They were not loved by their parents, or lacked other psychological satisfactions in their childhood. Very often they were poor. Not having enough money, food became a very important problem in their lives. They ate irregularly and badly, and their food habits were bad. Poor people depend on cheap foods—usually too many



starches, fat, cheap meat, and other weight-producers. To these economically deprived souls a good meal is a big heavy repast at which the eater becomes completely bloated. The feeling of being "full" comes to represent a kind of security, emotional as well as financial.

These people may become very successful in later life, but their early deprivations leave gaping holes in their emotional lives. They don't know why, but eating big meal after big meal brings them a kind of emotional satisfaction. Between meals their jaws are never still, they are always nibbling at sweets or cakes. They don't think of themselves as huge eaters, or even if they do admit that they overeat, they don't really understand why.

Many fat people joke about their fat, refer to themselves as too fat, and grin at the usual nicknames: "Fatty", "Tiny", "Elephant Boy", and the rest. "Everybody loves a fat man," they will tell you—except that they don't really like themselves.

They seem placid and protected behind their rolls of flesh, but we know from medical research that they are bundles of nerves—suffer from hypertension (high blood pressure), heart trouble, and a host of other killing diseases. Although they are proud of how beautifully they dance, their feet hurt them; and they know that girls are not fond of fat men.

Often they will say that they want to lose weight, but actually they are not convinced that this is so. To many overweight people, size of body has a psychological relationship with largeness of soul. "He is a big man," they say, referring to someone who is successful. No one who is small is a success to these poor overweights. They associate thinness with frailness. When they are fat they feel healthy, although the medical statistics tell a different tale. They are truly frightened of losing weight. Fat, to them, is a barrier against germs, weakness, and disease.

The fat man, behind his smiles and jokes, is almost invariably raddled by fear. In spite of his jolly, social air, he is lonely and afraid. He is haunted by a flock of appetites that feed on his vitals, and which he can satisfy only by stuffing himself like a Christmas turkey.

His appetites far exceed his metabolic requirements, of course. Which is why it is almost impossible for him to go on a diet. It is as painful for him to deprive himself of a mouthful of food as it is for an alcoholic to refuse a drink, or a miser to give a tip. If he diets at all, it is with the help of drugs. He is always looking for some magical drug which will suddenly melt his all too solid flesh.



If his doctor co-operates and gives him the most acceptable of the basically non-acceptable appetite-killers, amphetamine sulphate (Dexedrine), he is almost sure to take too much of it. Then he will be constipated and irritable—he will begin to suffer from insomnia, and may get dizzy spells and headaches. It will not be long before he is back on his glutton's diet.

In recent years medicine has been taking a new line with such "emotional eaters". They are no longer treated with just diets and/or drugs. They are given various kinds of psychological help as well.

Strangely enough, where just drugs or diets, or combinations of the two, had never worked for these people, the new mental approach often does.

Doctors in America divided 93 overweight neurotics into three groups. One group of 38 was treated with psychotherapy alone. (Psychotherapy consisted of explaining in simple terms the connection which can exist between a psychological disturbance and excessive eating.) They were then given the idea that eating was certainly no way to solve an emotional problem; that if they faced up to what was really eating *them*, they might be more able to control their appetites. These people were given no diets, no diet instruction, and no drugs.

The second group, 35 patients, was placed on a strict diet of 800 calories per day. This is far below the subsistence level, and if anyone could stick to such a diet, he would certainly lose weight rapidly.

The third group, 20 patients, was given drugs only—no diet, no psychotherapy. The drugs were supposed to kill their hunger, and thus allow them to reduce.

A year later, check-ups showed the following interesting results:

Group 3 (20 patients; drugs)—no weight loss at all.

Group 2 (35 patients; strict diet)—only 26 per cent had succeeded in losing weight after one year.

Group 1 (38 patients; psychotherapy)—70 per cent had lost considerable weight and had maintained the loss for the full year.

This one study showed that there was certainly a strong connection between emotional maladjustment and overeating; and that this could be cured or alleviated by some simple form of psychological help.

One doctor, Dr Harry B. Richardson, selected a typical case, a woman who had been overweight since childhood, made a careful

analysis of the woman's life, and applied what he learned to her problem.

He found that the woman had been the ugly duckling of a poor family. There was always enough to eat, but any special presents were given to her younger and prettier sister. The older girl felt rejected, and turned to eating to fill her emotional gaps. The more she was frustrated, the more she ate; and as she got fat, she had a good physical excuse for being unpopular. She withdrew from society, hiding behind her barrier of fat.

Dr Richardson explained to this woman that the reason she was fat was because she had a thwarted and unhappy childhood, a fact that she had some difficulty in understanding. He also asked her to report on her dreams, as a further aid to understanding her difficulties.

In one dream she was at a banquet but there was no place at the table for her. In another, two carts of wine were given to the crowd in a village square but no glass went to her. It was easy to point out that these dreams showed that she linked food with deprivation.

Other dreams were even more pointed. In one dream she saw jugs of milk on a pantry shelf; but as she reached for them they turned into people. In a similar dream, she saw two tiny men, and reached for some salt to sprinkle on them so she could cook and eat them. While she was talking about this dream, the woman laughed and said that it must be time to transfer her interest from food to men.

One more dream finally convinced the woman of her true problem. She dreamed that she opened her larder only to find a warm, naked baby curled up asleep on a plate among the food. She decided then, herself, that food had been her substitute for the home, love, and children she had never had.

Once she got this idea into her head, the woman stopped being a glutton, and began to take an interest in the people around her. In almost no time she had acquired a suitor. And she lost nearly 4 stone in weight.

Not all people have a problem as simple and easy to recognize as this woman's. But doctors are learning that, more and more, a patient's life history gives the clues to his present diseases. This is true of all diseases—heart trouble, kidney trouble, eczema, ulcers, and what have you—and it is certainly a good clue to the reasons for his overweight, if he is overweight.



### 3. *Losing Weight Together*

WITH increasing evidence of the psychological causes of overeating, many doctors have become interested in attacking the nation's "number one public health problem" from a new angle—through the mind, by the use of psychology.

As we have seen in the previous chapter, there is good reason to start from this point of view, especially with neurotic or compulsive overeaters. But such cases require individual attention over a long period of time.

Obviously, if one were setting out to help everyone who was overweight, through individual psychological treatment, the task would be impossible. There just aren't enough doctors to go round.

Fortunately, however, the average person's psychological problems, as revealed by overeating, are not severe enough to require expensive personal treatment. In most cases—even many which are abnormally difficult—a number of people can be treated together as a group, quickly and inexpensively.

An American doctor has proved this with some experimental work on human beings and their "motivations", i.e. the reasons why they could be induced to stick to reducing diets. His method of "group weight control" was tried out for the first time in 1949.

The groups totalled 120 people, with about 6 to 12 people taking part in each group. Nearly threequarters of the 120 people lost weight through the group experiment; total weight loss was almost one ton! Two individual members lost as much as 48 lb. each.

Yet this in itself was not conclusive proof that group weight control worked—for the goal was not just reducing, but permanent reducing. One- and two-year follow-ups would have to be made before anyone could be sure of the method.

At the end of the first year, most of those who lost weight remained slimmer. At the end of two years, 66½ per cent of those who shed weight were still slim.

This was quite a startling result, since most of the group had previously often tried to diet, had gone to doctors, had taken drugs, reducing Turkish baths, and exercises—but had never been able to take off more than a few pounds, and those only temporarily.

The fundamental reason why group therapy helps some people goes back to the idea that "misery loves company", and to the fact that it is easier to undertake, and carry through, a difficult task if

someone other than oneself is interested in the results. There are many other subtle psychological truths operating in weight groups. For example, we have said that the fat person is often lonely and maladjusted. Merely belonging to a group of people with a similar problem gives overweights a sense of social status that they have never had, not even in their own homes.

Group members gain insight into their own problems by exchanging experiences. Also, they experience the relaxed feeling that comes with unburdening one's troubles. So, by talking freely of personal problems, they both relieve the unbearable tension which drives them to gluttony and also begin to understand their difficulties in terms of the other fellows'.

An oversimplified example of how this group therapy works is the case of a young contractor. Like many, he had joined the group because he was looking for the magic word that would suddenly remove his fat.

After three group meetings, when no such magic formula had been forthcoming, but only some serious talk by the group leader (a doctor) and a round table discussion of diet, nutrition, and emotional problems by the other members, he suddenly burst out. "What's the trick?" he demanded.

The doctor did not answer him directly, but passed the question back to the others. "Does anyone know what the trick is?" he asked.

"Develop your self-denial. Try eating *one* biscuit!" said a blonde waitress, with a giggle. Her problem was eating the left-overs in the restaurant in which she worked.

A pretty student, with thighs so heavy she would never be seen in a bathing suit, said, "There is no magic formula. The only trick is: face the truth—grow up!"

The contractor who, at thirty-six, was nearly twice her age, didn't like this kind of talk from a teen-ager. He told the group what he thought of them, and stormed out of the room.

A week later he was back, trying to apologize. The others weren't interested in his apology but in his presence. "So you lost your temper," a taxi-driver's wife said. "So what? Perhaps if I lost my temper, my husband would take a day job, and I wouldn't stay up worrying and eating all night!"

"I was so ashamed I went out and had a big meal to quieten my stomach," the contractor confessed.

"Then," said the taxi-driver's wife decisively, "you've got to learn to control your temper."



"Perhaps," said a school-teacher, another of the group, "he ought not to worry when he loses his temper. Perhaps that's the answer. Everyone loses his temper sometimes, but not everybody feels so . . . so guilty about it."

"I wish my family would talk like that," the contractor said.

"Anyone could see that he had suddenly found a place where he belonged even more than he did at home," the group leader told me later. From that day on, imperfectly, and with many slips and lapses, the contractor dieted.

The group met once a week for sixteen weeks, and at the end of that time he had lost 29 lb., and his waistline was nearly 5 inches smaller.

Other group members have gained confidence and social status—and have lost weight—and with the same kind of help. A young wife found herself able to withstand the abuse of her in-laws without resorting to food for comfort. "I don't care what they say to my husband about me, now. I know he loves me, and the rest of this group like me. I've found real friends." A man stopped worrying about his job because he learned from the group that he had a quick, logical mind. He expressed it by saying, "I may have a big stomach, but I know I'm not a fathead. I can always get a job if I need one." And his excess fat began to disappear as he became able to control his food intake.

Regular attendance seems to be the major necessity for success in this type of treatment. Of one group of 21 housewives who attended weekly meetings, 13 attended more than eight of the sixteen meetings, and lost an average of 18 lb. each. Even at the end of a year following the ending of the meetings, they weighed an average of 17 lb. less than when they started.

Eight members of the group who did not attend meetings regularly lost no weight at all. At the end of the year, each weighed pounds more than she had before she began trying the group method.

An important part of the group-method success depends upon who is in charge. It seems better that he should be a professional person—preferably a doctor, a psychiatrist, or a psychologist, but groups have been led successfully by many different types of people and with different techniques.

At Herrick Memorial Hospital, California, recently, a group of 100 women and 7 men were divided into eight smaller groups, ranging in size from 8 to 27 members. One large group developed a

technique of working by slogans, such as "Take thin soup and not a sweet", or "Develop WON'T-power!" Another large group tried general discussions before they settled down to the serious business of weight control.

As the groups got going, they developed an inner cohesion of their own and the general discussions were dropped.

By adapting the technique to the group, and by letting each group set its own pace, the experiment proved successful. Of the 107 dieters, 83 lost a total of 990 lb., or an average of nearly 12 lb. per person.

There are many more sides to group dieting than are discussed here, and there is no reason why similar methods should not be employed in this country. The essential facts point out one basic truth: given the necessary information on nutrition, and the proper encouragement, almost anybody can lose weight.

#### *4. Permanent Reducing*

AN American industrial company, the Bell Telephone Company, recently came to similar conclusions about dieting. They too were interested in weight-control groups, but for different reasons. Their approach was not primarily psychological. They wanted merely to help normal people learn all the facts about dieting; in other words, the groups they set up were a kind of diet class. Their group work consisted of only four group meetings, in which there was a considerable exchange of factual information about food, calories, nutrients, and so forth.

Group work is a matter of convenience, not of necessity. It saves time and trouble to give instruction to six people at a time, rather than to instruct each person individually. The plan was devised by Dr M. H. Manson and his staff, for men and women, active employees of the Bell organization. The doctor assumes that the average employee of the company who wishes to reduce, or gain, or maintain present weight has no serious mental or emotional difficulties that are causing overeating. However, although these groups do not go deeply into the emotional and psychological difficulties which beset the members of the groups we have previously mentioned, the fact that several women undertake to solve a joint problem mutually does give each one of them some extra stimulus in sticking to the diet. For one thing, the women in this company work together and



know each other. They see one another every working day, and share their mealtimes in the company canteen; hence they can help bolster each other's intention to stick to a diet. There is the usual amount of friendly competition in weight loss, and there is the group spirit to keep up morale against the teasing of other non-dieting company employees.

The Bell firm's method of "making your own diet" is just as effective if practised alone at home, as will be shown in Chapter 20—"The Story of Mrs Marion Archer".

This diet was first put into practice during the last few years. It has been a great success. Of the first 650 overweight women who learned how to make their own diets, every one lost some weight. What is more, a great number attained their ideal weights, and have maintained those weights until the present time. (How the diet works is described in detail in Chapters 19-23.)

Why has this diet been so effective among so many people, many of whom had tried other diets without success? The answer is in the very nature of the overweight problem itself.

First, the trouble with all other diets is that they are standardized. The diets that are printed in newspapers and magazines are devised for some non-existent "average" person, hence they do not apply specifically to any one individual. There are other reasons why most standardized diets do not work, apart from their standardization (see Chapters 8 and 9 on fad diets, food frauds, etc.). But one of the biggest single reasons is their impersonal quality. They do not take into account individual differences of taste, for example. Nor do they allow for the different requirements of a tall girl as against a short one, or the different food needs of an office worker as against a housewife.

Furthermore, they do not really provide a good reason for dieting. True, they capitalize on the average overweight woman's desire to wear fashionable clothes, which are difficult to find ready-made in the large sizes. And they assume that she would like to look good in a bathing suit; just as the average male would rather show off strong muscles than a pot belly.

The average diet depends upon the appeal of good looks to make insufficient food seem desirable. But goals are not enough to sustain you when you begin to get hungry! The diet should keep you from starving to death, but it should also be preceded by enough instruction as to what makes you overeat and of what a good diet consists. In other words, you are an intelligent animal as well as an eating

animal, and the average diet does not give you enough intellectual reasoning to start with. It appeals to your emotions, something that weakens in direct proportion to your hunger.

And there is another way in which ready-made diets fail you. They do not take into consideration that *you* are *you*. You don't want to be led by the nose. You want to know where you are going, and why. If you are going to diet, you want the opportunity to make your own diet. Once you do this, you are interested in a way that no paper diet can ever interest you.

These, then, are the reasons why making your own diet is by far the most effective method of dieting. You cannot work out your own diet until you understand your own weight problem, which is unique and personal, and until you understand enough about nutrition to construct a diet that will nourish you while you are losing weight, and, after that, to make another diet for yourself when you have achieved your desired weight—a diet that will be broad enough, and flexible enough, and satisfying enough to feed you for the rest of your life and keep you slim.

This book puts on paper what the Bell girls are given at group meetings, also some extra facts and charts which will help you to work out your own diet and stick to it. It shows you what is wrong with the fad and beauty diets, which may have tormented you. It gives you the basic facts about nutrition, as understood by scientists in laboratories. It relies on no single food, or group of foods, simply because the author and the publishers are not in the food business. It tells you what is good about foods and what is undesirable, in so far as doctors and research workers have discovered the facts. It demonstrates the relationship between diet and disease, between diet and dental troubles, diet and pregnancy, and other important relationships between the food you eat and your health and well-being. It promises no panaceas or short-cuts. But it does contain everything you need to know about diet and weight, and diet and health (the two are not necessarily the same).

Working on the facts given in this book, you should be able to reach your desired weight and stay there for the rest of your life—provided you are not more than 25 per cent over your desired weight to start with, are not pregnant, nor suffering from any disease which requires a special diet or which is glandular in nature. But even in any of these circumstances, there is nothing in this book injurious to your health, and a great deal that is helpful to know.



## 5. *Waistlines and Lifelines*

A MAN I know recently bought a house, part of the payment for which was made through a fifteen-year mortgage. Payments on the mortgage, while not unusually high, have to be made regularly, or the bank from whom the money was borrowed may foreclose on the property.

This man has a good job but not much saved, and if he should die prematurely, he doesn't want to leave his widow with a number of payments to meet. So he decided to take out the kind of insurance known as a "mortgage insurance". This is a special policy insuring the remaining balance of the debt, so that if at any time during the fifteen years he should die, his widow would not have to worry about meeting the payments.

The point of this story is that my friend had to pay a premium higher than normal to get the insurance, although he is only forty-one years of age and apparently in excellent health. The insurance doctor did not dispute his statement that he had never been ill for one single day in his life. He came to his decision on the fact that my friend is seriously overweight (the amount would vary with different insurance companies, so there is no point in quoting the exact figures), and that his blood pressure is above normal. He is not, perhaps, tremendously overweight in pounds—has not a great deal of extra blood pressure. But these two facts, together with one or two minor symptoms, made the insurance doctor and his company suspicious enough to charge more money to insure my friend's life.

My friend found that overweight is not measured merely in pounds but in percentages. He was more than 20 per cent overweight, which put him in the "danger" category. Anything over 10 per cent is a definite liability and will certainly count against you in life-insurance premiums.

Similarly with regard to blood pressure, it is not just the present condition but the future probabilities which insurance companies must consider. When they charge higher premiums for fat men and women, they are saying in the most precise terms that they do not expect most fat people with higher-than-average blood pressure to live an average life span.

My friend's case is one way of emphasizing this fact, and of pointing out that his condition is common. Also that overweight adults *of all ages* (even those who have no symptoms of disease) are worse risks than people of average or below average weight.

One of the things that put the insurance doctor on his guard in my friend's case was this: It has been found that among youngish overweight men disease is lurking and almost certain to strike in later years. So, even though my friend was healthy and normal in most respects, the odds are against him staying so.

He runs an increased risk of developing dangerous high blood pressure in his middle years, or of becoming diabetic, or of having his heart or circulatory system or kidneys begin to show damage and decline. In a clinical study, 85 per cent of the men who became diabetic after the age of forty had been overweight; only 5 per cent were underweight—as chilling a fact as a fat man can find.

Overweight women are especially hard hit in their most important natural function, pregnancy and childbearing. And not only are fat women worse risks as mothers, they also have more complications in childbirth and a higher degree of deaths among their unborn children.

After the age of forty, the death rate among all overweight women from diabetes was found to be three times as high as among women of normal or below normal weight. Gall-bladder disease, amongst other things, develops faster in overweight females, and kills them at a rate many times greater than it kills women of normal weight.

The biggest killers of all people are the heart-blood-vessel-kidney diseases, but fat people develop them earlier and die earlier from them than do thin people.

Even some forms of cancer seem to be more prevalent in overweights. Overweight is 33 per cent more prevalent among women with cancer of the endometrium (lining of the womb) than in the adult female general population. And cancer of the genital organs is found more frequently among obese women.

Also, it has been proved much more difficult to treat the same kind of cancer in fat women than in thin women. Hence a higher percentage of the former die, while more of the latter are cured of the same disease. (For purposes of discussion, a five-year period free of cancer is usually spoken of as a "cure".) For example, in cases of cancer of the cervix (the neck of the womb) only 37.5 per cent of the women who averaged 170 lb. weight were cured; whereas 54.6 per cent of the women who weighed less were cured of the disease. So much for cancer and overweight—fat has many other deadly and dangerous aspects.



You might be overweight, for example, and need an operation. Doctors dislike operating on fat people, for the simple physical reason that there is so much extra tissue to handle. Then, fat does not heal as quickly as lean tissue; for one thing it has a much poorer blood supply.

In one survey, a doctor showed that the surgical mortality among patients operated on for appendicitis was five times as high in the overweight group as in the normal weight group; in the operations for cholecystitis, mortality was four times as high for obese patients as for the others. In all surgery, post-operative blood clots form more often in fat people than in others.

Men have their fair share of troubles from too much fat. Take hernia, one of the most common and widespread disabilities found among men. It occurs much more frequently among fat men than among thinner men—this applies to the common, inguinal type of hernia and the post-operative type. The latter occurs because tissues burdened with fat do not heal as readily as normal muscle tissues.

Fat men's—and fat women's—kidneys do not work as well as those of other people. Test their blood pressure. It goes up, up, up with each pound of excess weight—on the average. The deadly (generally called malignant) type of high blood pressure known as sustained hypertension or chronic high blood pressure develops at a rate  $2\frac{1}{2}$  times as frequently among fat people as among those not overweight.

Fat men die of cardiovascular-renal disease at a rate 50 per cent greater than men of normal weight and of diabetes nearly four times as often as the others.

Excess weight is a physical strain as well as a strain on the internal organs. It bows the body and grinds on the joints and slows down the vital functions. It is no fun to walk if you weigh too much. By putting extra strain on the joints, excess weight, doctors believe, plays a large part in the onset of arthritis. Fat men have more accidents than thin men by reason of their clumsiness, among other things, and their generally slower reactions.

The physical effects of fat on bodily disease are many. Fat people perspire more than others—this is the body's attempt to get rid of excess heat caused by overeating; and they have more skin troubles than the rest of the population. Fat in the body tissues causes resistance in the blood vessels, and therefore greater work for the heart. Fat in the chest impedes the movement of the heart—

causes breathlessness and may bring on hypertension, angina pectoris, cerebral anaemia, and cerebral apoplexy.

Fat people often have a high incidence of passive congestion of the flow of blood, from cardiac diseases. Fat causes congestion of the blood in the capillaries and the venules. There is impairment of breathing from accumulations of fat in the muscles, diaphragm, and other parts of the chest. Hence fat people are more subject to pulmonary oedema, chronic bronchitis, and pneumonia.

Constipation is a frequent companion of obesity, so are haemorrhoids. The liver is frequently enlarged and is often attacked by cirrhosis. Sexually, the fat man is usually disinterested, often incompetent. Likewise sterility is common in fat women.

There is almost no end to this catalogue of dangers as it relates to fat. My purpose in reciting these grisly facts is to bring home the dangers of overweight and also to point out the vital fact that keeping the right weight is the way to prolong your life. For while the statistics are not as plentiful on this point, there is ample evidence that many fat people who are suffering from the early stages of effects of their overweight can rid their bodies of diseases brought on by fat, or if they are still symptom-free, can prevent them, by reducing and staying reduced.

In doing research on this subject, I have visited numerous clinics and, in discussing overweight, have been told time after time of cases in which hypertension and other conditions have been reduced or eliminated at the same time as loss of excess weight.

One doctor had studied a group of 294 fat people. Some of them lost weight, most of them did not. But those who did had their reward. There were 33 who showed physical signs of disease associated with overweight and who had then lost weight. Of these, the diseases of 17 had not progressed since they started to lose weight. They were better, in fact, than they had been five years before.

It is normal for one's blood pressure to increase slightly with age. Yet among one group of overweight people with high blood pressure, those who reduced showed a decline in blood pressure over a five-year period. In the same group, some did not reduce and their blood pressure was higher than it had been five years earlier.

Similarly, weight reduction improved the condition of overweight diabetics. When middle-aged diabetics were brought down to normal weight, sugar tolerance became normal in nearly 75 per cent of the cases, and it improved in half of the remaining 25 per cent. In some



cases, after continued reducing these diabetics were able to give up their insulin.

I hope that the reader does not take these results as a promise. If you have been overweight for too long, you may already be feeling the chronic effects in terms of disease or disability. Even so, weight reduction may bring some relief.

But if you are overweight and still healthy, there is every chance that reducing now will add many disease-free years to your life span. Of course, you must not only reduce—you must stay that way.

The real difficulty in weight control is that so many people try and so few succeed. But there is widespread feeling among doctors that the cause is far from hopeless. The overweights who cannot reduce are those who have been persuaded to try all kinds of food fads or quack diets, or who have not been properly instructed in the dangers of fat. Many, as we have seen, actually think that fatness means health and strength—and have not been given the basic truths of eating, without which no one should attempt to gain or lose weight.

## PART TWO

# DANGER: FADS AND FANCIES

### *6. Beware of Diet Frauds*

You should learn to watch out for high-sounding claims in reducing. Very often they are downright lies, cleverly concealed within half-truths to fit the particular product a promoter is trying to sell you. The half-truths are often buried under high-sounding scientific words. Or they may be facts taken out of some bona-fide medical research, but given without the qualifications in the original work.

For example, it is true that overweight, when coupled with such serious diseases as diabetes, hypertension (high blood pressure), and diseases of the liver, kidneys, or gall-bladder, can be a serious situation calling for immediate and drastic reducing. In such cases, when the patient is under the care of a doctor, it is often necessary and desirable to bring about a rapid loss of weight.

But it is not, therefore, true that all overweight people should reduce suddenly and drastically. If your health is good and you are not under a doctor's care, it may be not only unsafe but downright dangerous for you to try to take off 4 or 5 lb. a week. The safe limit of reducing on a sound diet, for normal people, is 2 lb. a week at the most. More than that puts a severe strain on your system which may result in illness or disability.

The best way to recognize the food quack and the diet promoter is to ask the simple question: what is he trying to sell me? If you have to buy some special food or group of foods, if you have to purchase certain vitamin or appetite-reducing pills, or if you are supposed to buy some special literature before you start reducing, you can be 99 per cent sure that someone is more interested in lightening your purse than your weight!

Every time you see a scheme for quick, easy, and painless reducing, remember this: you developed those extra pounds over a long period of time by overeating. It is going to take time, perseverance, and patience to remove them.

Don't listen to the siren song of the manufacturer of slimming salts. The salts are nothing but a too strong laxative which will put a great strain on intestines and which will only apparently reduce you. The net reducing effect of such salts is . . . nothing—except, perhaps, the possibility of bad health.

Do not count, either, on reducing baths. Warm baths are relaxing, but too hot baths are dangerous. The film star Maria Montez is reported to have died in an overheated reducing bath. The too hot water put a strain on her heart it could not withstand, and this young woman died at the height of her career as the result of a strenuous attempt to reduce.

If you are overweight and would like to reduce, it is likely that you have been tempted more than once to try some new method of losing weight, by buying some brand-new vitamin or reducing food. If you have, you have discovered that there is no quick, easy answer to your problem.

Possibly you blamed yourself for your failure. Actually you should blame the faulty pill, or the "reducing vitamin" which promised so much more than it could perform.

Always beware of the pills and nostrums peddled by the diet quacks. Some of these contain nothing more harmful than dried skimmed milk, sugar, and vitamins. Taken before a meal, they are supposed to act as appetite suppressors—which they are, up to a point. Any sugar taken before a meal will reduce hunger to some degree.

Other diet pills are more harmful. Some are of the salts type, and are made of laxatives which are unnecessary and irritating. Others are made of thyroid extract, to speed up your metabolism and help you to burn up more food. They have the same effect on your system as constantly racing the engine has on a car—they wear it out. Some pills even contain benzedrine extracts, drugs that make you tense and nervous, set your heart pounding, and make it difficult for you to sleep.

Doctors rarely prescribe these drugs, even under conditions where patients are under constant supervision. Not only are they dangerous and have unpleasant side-effects, but they do not really help anyone to reduce for more than a few days. The ultimate effect is often a weight gain, because the patient becomes so nervous owing to the drug that she begins to overeat in order to settle the butterflies in her stomach.



## *7. Fad Diets Don't Work*

A **FAD** diet is any prescribed group of foods which do not contain enough nutrients or vitamins to support good health. Unfortunately most of the popular diets fall into this category. Unfortunately, because the fad diet is the worst kind of reducing diet for two reasons: (1) it usually does not reduce you at all, because you cannot stick to it; or (2) if you have tried one and found it worked, you have also found that it reduced not only your weight but your ambition, your energy, your good looks, and your feeling of being really well.

Many fad diets are downright dangerous because they rely on bulk fibre to (a) kill hunger and (b) increase elimination. So you eat less of the nourishing foods and force out some of the nutrients in those you do eat.

The trouble with most fad diets is that they create real hunger, for they do not provide the body with enough calories to walk around and carry out a normal day's activity. They are so far short in providing necessary fuel for the body, as well as in essential nutrients, that they constitute a kind of slow torture.

A person has to be truly desperate to stick to one of these diets. Most of us are not desperate, so do not stick to them. But, desperate or not, weight loss or no, the fad diet does not do the real job of weight reducing; it is not permanent.

It is impossible, except by devoting an entire book to the subject, to analyse all the schemes and reducing diets that are current today. Generally speaking, they fall into certain patterns. The chief fallacies and dangers of these fad diets are recognizable, if you know what to look for.

Take, for example, the "beauty" diets. Some of these have so few calories, ranging from 600 to 1,000 per day, that they should be called starvation diets. Any woman can lose weight by starving herself. But the other consequences—even if you have the will-power of a saint—can be seriously damaging to your health, your looks, and your vitality.

One of the most popular slimming diets is an actual starvation diet which does take off pounds. It consists almost exclusively of vegetables and fruits, mostly raw, for the laxative effect; it allows an occasional piece of lean meat or fish, and a single very small portion of skimmed milk.

Its appeal is to health and quick reducing. Yet the diet provides so



little nourishment that it will not balance the energy requirements of an adult who spends the entire day in bed. On this diet, even if you stayed in bed all day and all night, you would become weak and listless.

And it is lacking in much more than calories. Here is what it allows you in a single day:

### *Breakfast*

1 medium orange (juice or whole)  
 1 medium pear (fresh)  
 1 cup black coffee (no sugar)  
 ½ cup skimmed milk ... (166 calories)

### *Lunch*

1 medium tomato  
 2 oz. lettuce, or  
 2 oz. mixed salad of cabbage, watercress, parsley  
 1 tbs. dressing (there is nothing wrong with this dressing: skimmed milk, lemon juice, salt, paprika, garlic)  
 ½ cup mashed turnip (no butter)  
 ½ cup string beans (no butter)  
 1 medium apple ... (169 calories)

### *Dinner*

Watercress and onion salad  
 1 lean lamb chop, or  
 1 medium serving fish  
 6 stalks asparagus, or small helping of spinach or cabbage  
 Small apple or pear ... (179 calories)

So your total calories for the day are 514, which is about 700 to 800 calories below the safe level for a woman, 1,100 calories too low for a man. And this is not the whole story. This diet is lacking in much more than sufficient calories to keep you walking about. It is also lacking in sufficient amounts of every important mineral, protein, and vitamin, except one, which you need to stay healthy.

	<i>Diet A</i>	<i>Your Need</i>
Protein (gm.)	23.7	60
Calcium (gm.)	0.487	0.800
Iron (mgm.)	7.8	12.0
Vitamin A (I.U.)	4,611	5,000
Vitamin B <sub>1</sub> (mgm.)	0.781	1.1-1.5
Vitamin B <sub>2</sub> (mgm.)	1.036	1.5-2.0
Vitamin C (mgm.)	194	70

In all but vitamin C this diet is sadly deficient, and the extra vitamin C does you no good at all. Vitamin C is not stored in the body; so any surplus to the daily need is eliminated.

Hundreds of thousands of women have tried this diet, and those who stuck to it long enough to lose weight lost energy and health as well. Fortunately, however, the diet is so monotonous, and leaves the dieter so hungry, that many women who tried it could not keep it up long enough to do themselves any harm.

There is a type of diet that might be termed as the "half-truth" diet. It pays glib lip-service to the daily vitamin-mineral requirements. But it claims to have discovered new, more perfect sources for nutrients—which means you must buy several special foods. What is more, it involves a lot of inconveniences and added expense in the form of special baths, massage, and exercises, which complicate your life and make it more expensive.

This diet is so deficient in calcium-containing foods that it depends a great deal on calcium tablets (which you must buy) to make up for this lack. Actually, it seems to give you more than your daily requirements of calcium—if numbers mean anything; but this is where the half-truth comes in. The calcium is in pill form.

Now it is a proved medical fact that calcium tablets as used in this diet are only minimally absorbed by the body and are therefore useless.

The body can utilize some substances only if other substances are present. Calcium is a good example of this, since it can be absorbed only if adequate amounts of vitamin D and phosphorus are present. That is why milk and milk-containing foods are always specified in any sound diet, reducing or otherwise, because most milk has vitamin D to help the body absorb the calcium which milk also contains. Unfortunately, this fad diet calls for only a single glass of milk and a small amount of cream per day—not enough to provide you with the necessary calcium.

Another pointer as to the efficacy of this diet is that it requires you to take 8 ounces of citrate of magnesia, "or, if your doctor objects, a tablespoon of lemon juice in hot water". Now if the purpose of the lemon juice is to serve as a substitute laxative, the diet would do better to prescribe, merely, a larger glass of warm water. Lemon juice has no proved laxative effect on the human body whatsoever.

This diet also depends heavily on extra elimination caused by brewer's yeast and by herbal tea and herbal laxatives (all special



things you have to buy). It even suggests, if these methods do not "prove effective in inducing copious bowel movement", that one should take "an enema to get started".

But perhaps the two biggest faults of the diet, apart from the lack of calcium and the strain on the bowels, are (a) that it does not provide enough calories to keep up one's strength—just under 1,000 per day instead of the necessary 1,200 to 1,300 safe minimum, and (b) that it is much too low in protein. Any diet that does not give you your full daily quota of protein is doing you real harm whether you are ill or well, pregnant or not.

There is another type of diet known as the "eliminative diet", which consists of a large portion of fibrous foods, aided on their course through your digestive system by laxatives. Now cellulose fibre—which is the same thing as wood—is not digestible by the human stomach, although it provides bulk for the digestive tract. Too much of it injures the intestine by its abrasive action on the soft tissues of the bowel.

Also, by propelling food through the system at a rate so fast that the body does not have time to digest it, the eliminative diet prevents calories, vitamins, fats, and minerals from being absorbed.

The eliminative type of diet is based on the ridiculous theory that the body is constantly manufacturing poisons from ordinary foods. The eliminative diet consists largely of those foods which "dissolve" the poisons and "flush" them out of your system. The foods suggested in these diets consist largely of vegetables and other special products to which all faddists are partial.

Many of these concoctions are harmless but expensive—for example, soup made up of carrots, celery, spinach, and other vegetables, seasoned with salt, and sold for about a shilling a packet. A housewife could prepare a much larger quantity of this soup at home for less money.

The eliminative diet is easily recognized, for it invariably includes laxatives disguised as herbs or "tea". And because of these laxatives, and because the rest of the diet is made up of vegetables and fruits which contain far less than the safe minimum of starches and proteins, it is quite obvious that there is little opportunity for the body to gain weight.

As with many other fad diets, the eliminative diet will do definite harm if it is continued for any length of time. Fortunately, people in normal health usually cannot stick to such a diet for very long without becoming bored, hungry, and more than a little uncomfortable.

The eliminative diet may suggest mineral oil in salad dressing as a substitute for vegetable oils. Or it may suggest large doses of mineral oil. Now, mineral oil is a lubricant, and it has no calories, so it should, theoretically, make a very good substitute for salad oil. But mineral oil is very bad for you for two important reasons.

The first one is that a whole group of vitamins in your food are fat soluble—that is, they dissolve in the fats you eat. Now if these vitamins dissolve in fats such as butter or margarine, which you digest, you get the full benefit of the fat-soluble vitamins. But if these vitamins are dissolved in mineral oil, they will pass through your digestive tract without being absorbed into your body, and you can, if you continue to use mineral oil for any length of time, develop a serious shortage of vitamins A, K, and possibly others. It also happens to be true that the fat-soluble vitamins seem to prefer being dissolved in mineral oil rather than in the digestible fats, so that even if you take butter or olive oil, you will still lose your vitamins to the mineral oil.

Another and even more serious consequence of taking mineral oil internally is that some of the oil may become so mixed with your intestinal emulsion that it may not pass through your system, but, instead, will become absorbed. But the oil does not become absorbed in the same way as the rest of your food. It is a foreign body in your system, just as much as if you had swallowed a button. And, in a sense, it is even worse than that. The button will not find its way into your liver or your lymphatic glands. It may be passed out of your body without doing any damage at all. But the mineral oil *will* get into your liver and lymphatic glands, and set up irritations in these places, and cause what the doctors call "typical foreign-body reactions".

Once a fad diet takes a hold, it often persists for many years after it has been disproved. Once there was a rage for the "Don't Mix" diet. This called largely for green vegetables, and, above all, advised that one must never, ever, eat protein and starch at the same meal, because, theoretically, the first required an acid condition to be properly digested, and the other required the opposite—an alkaline medium.

So, in the "Don't Mix" diet, you were not allowed to eat cereal and fruit at the same meal, no milk or cream with "acid" fruits. Under this diet there was an almost complete avoidance of such vital nutrients as fats, sugar, and animal proteins, and a disastrous cut in starches.



Now there is absolutely no scientific basis for not mixing foods. As a matter of fact, there are almost no foods which are 100 per cent protein or 100 per cent carbohydrate (sugar and starch). The very foods themselves are mixtures of the so-called unmixables; and, what is more, the diet ignores the basic fact that digestion is carried on in the mouth, the stomach, and the intestinal tract. In these organs the digestive juices act on proteins and starches alike, and at the same time.

If you need further proof, here it is. An experiment was carried out at one hospital in feeding patients suffering from almost every type of disorder. Some were given just meat—others meat and mashed potatoes. It took the latter exactly three minutes longer to digest the meat with the potatoes than it did the former to digest the meat alone.

The "Banana and Skim Milk" diet is the least harmful of the fad diets. It consists of nothing but bananas and skim milk for two weeks; and after that time, small amounts of lean meat, vegetables, and other fruits are added. It offers a very restricted calory intake—from 700 to 1,000 calories per day—and therefore should not be undertaken except with a doctor's permission. Only a physician can guide you as to whether or not this diet is suitable in your particular case. It is low in iron, and extremely monotonous (if you cannot diet and keep your good humour, it hardly seems worth while reducing!), and with some people it develops an intolerance for milk, which must be consumed in large quantities. Still, if you want to try it, *and your doctor approves*, . . . go ahead!

This is just an outline of the fad diets—enough to give you their salient features, and to help you to recognize and stay away from them. They are responsible for the low state of nutrition in many young women and girls who follow them completely or in part. They are also responsible for some real harm.

The ones most gullible and least able to resist the ravages of poor diet are the people who are in ill health to begin with. These are the easiest victims, for they are often on the look-out for some hope which a doctor cannot offer. So they become victims of the self-styled diet "experts".

# HOW RECOGNIZE FAD DIETS ?

## PRINCIPAL FOODS

"STARVATION" TYPE	"BEAUTY" DIET TYPE	"ELIMINATIVE" TYPE	"DON'T MIX" TYPE	BANANA & SKIM MILK
RAW FRUITS (Grapefruit) VEGETABLES LEAN MEAT OR FISH (Occasionally) MELBA TOAST MILK (Very small amount)	FRUITS VEGETABLES MEAT (Minimum) MILK (Half of Normal Requirement) ALSO: SPECIAL TEAS YEAST CALCIUM TABS. HERBAL LAXATIVES	VEGETABLES SO-CALLED "HEALTH" FOODS: BROTHS SALTS HERBS TEAS	FRUITS VEGETABLES MEAT AND OTHER PROTEIN BREADSTUFFS: THESE ONLY IN CERTAIN COMBINATIONS. EXAMPLE: NO CEREAL AND FRUIT AT SAME MEAL. NO MILK IF YOU HAVE CERTAIN FRUITS.	BANANAS SKIM MILK AFTER 2 WEEKS SMALL AMOUNTS OF LEAN MEAT, VEGETABLES AND FRUIT ARE ALLOWED.

## DAILY NUTRIENTS

	"STARVATION" TYPE	"BEAUTY" DIET TYPE	"ELIMINATIVE" TYPE	"DON'T MIX" TYPE	BANANA & SKIM MILK
CALORIES	500-700	1,000 (Approx.)	USUALLY BELOW SAFE LEVEL	USUALLY BELOW SAFE LEVEL	700-1,200
PROTEIN	VERY LOW	LOW	VERY LOW	VERY LOW	SATISFACTORY
CARBOHYDRATE	LOW	ACCEPTABLE	VERY LOW	STARCH: VERY LOW SUGAR: ALMOST NONE	SATISFACTORY
FAT	VERY LOW	ACCEPTABLE	VERY LOW	ALMOST NONE	SATISFACTORY
VITAMINS	LOW	GOOD, AS A RULE	LOW	MINIMUM REQUIREMENT	SATISFACTORY
CALCIUM	LOW	QUESTIONABLE	LOW	MINIMUM REQUIREMENT	SATISFACTORY
IRON	LOW TO MODERATE	SUITABLE	LOW	MINIMUM REQUIREMENT	LOW
	ALSO CONTAINS VERY HIGH AMOUNT OF ROUGHAGE		STRESS IS ON ROUGHAGE AND PURGING		



## 8. Food Fables

IN the Garden of Eden there was an apple one bite of which would give the biter a knowledge of evil; in *Alice in Wonderland* there is a magic mushroom which, when eaten, makes the eater grow taller or shorter, depending upon the side of the mushroom from which the bite is taken. The Hebrews and many Semitic people do not eat pork, which they regard as poisonous; and the Hindus do not partake of the flesh of cows, which are sacred beasts.

All these beliefs and taboos in connection with food have something in common: they are magic, and they are irrational. There is no magic apple or magic mushroom; nor is there any intrinsic harm in pork or beef.

Common sense and scientific knowledge tell us that the good or bad in foods does not come from sorcery. True, some mushrooms are poisonous, and are, therefore, inedible; and some pork may contain trichinosis, and should, therefore, be well cooked. But careful selection of mushrooms will avoid the poisonous variety, and careful selection and cooking of pork and other meats will eliminate the danger of disease.

Yet these and other magic beliefs persist in the field of nutrition. They persist through ignorance and are fostered by quacks and food fakes, who have something to gain in the process.

There is, and has been for a long time, a great hullabaloo about the so-called "natural" foods. These are the foods found in nature, rather than as refined by man. These are foods that are grown in so-called "natural" fertilizer, rather than in land fertilized by chemicals.

Let us take good look at the refined foods. Sugar is refined from sugar cane. A sweetening which is [nearly identical—sucrose—is refined from flowers, by bees, and is called honey. Now honey has some things that refined sugar does not have—some small traces of vitamins and minerals. But it is mostly sugar. And the additional value you get from honey—or from brown sugar—or from black treacle or molasses—when used as sweeteners is not essential to you health if you are eating a well-balanced diet.

Take another food which is usually refined—flour. Wheat flour in its natural state is brown. The wheat germ is covered with a substantial brown coating which is largely made of cellulose—that is, the same thing as wood. It is not digestible. It does not nourish you at all. It does furnish roughage, or bulk, in your diet, something that

we have seen is important, but which you get from many other foods. Also, whole wheat has more phytic acid. This does not aid the absorption of the vitamins in whole wheat, but rather retards it. So does the cellulose.

Now whole wheat has, theoretically, more vitamins and minerals than unenriched white flour. But there is very little flour on the market—either in uncooked or finished form, such as bread, which is not enriched. In fact, the bread manufacturers are constantly trying to outdo one another in the amounts of B vitamins and other vitamins which they add to their bread.

One man who has spent years in chemical analysis of foods and nutrients says, "I do not know of any evidence to support the idea that whole wheat products are superior nutritionally in man as compared with enriched flours". However, some unrefined foods should be eaten for their roughage.

So much for refined foods. Now let us consider those vegetables which are supposed to be inferior because they are grown with the help of chemicals rather than with "organic" fertilizers.

Any fertilizer will have an effect on the amount of crop produced by any given piece of land. With proper fertilization you can produce more, without it you produce less. But no fertilizer can affect fat, protein, carbohydrate, or vitamin content of any food grown.

In other words, it makes no difference in the product of the soil, so far as fat, protein, carbohydrates, or vitamins are concerned, what you use in the way of fertilizer—whether you use animal dung or something out of a chemical factory. There is some difference in the amount of mineral content of the crop, depending on the amount of mineral content in the soil. But apparently this difference is slight and unimportant.

I do not mean to underrate this problem. Minerals are important in your food, and if you do not get them you will not be healthy. But the chances of your developing a mineral deficiency from eating a balanced diet are nil—unless you eat only food which comes from the same piece of ground, in which there might, conceivably, be a mineral deficiency.

There are, of course, certain areas which lack one or more of the "trace" minerals (so named because only small traces are required by the body: the trace minerals include cobalt, manganese, iodine, zinc, and, possibly, fluorine, aluminium, and boron). If a man were to live only on the products of this depleted soil, and on the flesh of animals who grazed there, he would develop one or more mineral



deficiencies. But as most of us buy foods that come from various areas, these deficiencies are rare in humans.

A lack of iodine in the body can account for certain upsets of the thyroid gland. Now parts of Derbyshire are lacking in iodine, and in the past this complaint was quite common—hence the term “Derbyshire neck”—but since a Parliamentary bill decreed that a certain percentage of iodine must be added to all table salt, we no longer hear so much about the disease.

The lack of manganese in some animals causes certain diseases, but there is no evidence that such a deficiency occurs in man. Lack of manganese in the soil does, however, increase the niacin and riboflavin (B vitamins) content of tomatoes, while decreasing the vitamin C content. Copper is certainly a vital element in the health of both man and beast; so, as everybody knows, is iron.

It is true that dark molasses, or black treacle, contains a good proportion of iron, and as such is a good food. But you can obtain iron from many other foods—eggs, liver, beef, and dried fruits, for example—and it will do you just as much good as the iron in dark molasses which so many people believe in.

The same goes for wheat germ and whole wheat. You can eat whole wheat, and it is good for you; or you can eat enriched white bread, and it is good for you too. From the point of view of healthy eating, your body doesn't know the difference between whole wheat and enriched wheat flour. Or wheat germ. It is a choice you can make, freely, to suit your own appetite. But you needn't worry about which you choose—they will all do you about an equal amount of good.

Many food faddists will recommend perfectly harmless foods to perform impossible tasks. They will tell you that vitamin B prevents deposits of cholesterol from forming on the walls of your arteries. They will tell you that a deficiency of vitamin E will cause ear trouble. And, similarly, they will prescribe a diet to cure deafness—a diet including orange, grapefruit or lemon juice, some cheese, and a raw vegetable salad.

None of these people can be prosecuted, for they are not actually doing harm. Supplementary amounts of vitamins B and E in small doses will not harm you. Your body absorbs what it can and throws off the rest. And a raw vegetable salad, cheese, and fruit juices are good in anybody's diet, providing he can digest them.

The people who tell you that this or that vitamin will do this or that specific job for your heart, or your hearing, or your glands are

not, however, telling you the truth. Our knowledge of the complicated process of nutrition is still patchy and incomplete, but it is, and has been for some time, unshaken in its basic findings that there are no magic foods; there is no single magic food; there is no supernatural diet that will keep you young or make you strong. All the best research brains in the world and all the finest scientific judgment come to the one basic conclusion: eat a balanced diet. Stay away from the fad foods and the fad diets. You will live as long as you can and stay as healthy as possible by doing that.

## *9. Fashions in Food*

THERE are fashions in food, just as there are in women's clothes. Food fashions follow new discoveries in nutrition. When a new fact is discovered and publicized, suddenly, like stampeding cattle, we are off and running towards this latest panacea.

Eventually these panics recede, leaving the new discoveries in their proper perspective. But each wave of enthusiasm also leaves behind an increment of ignorance and misinformation, and fertile ground for the food faddist and fad diets.

For example, there was a time when it was discovered that food contained calories. At that era in history, everyone became interested in the energy values of food, and diets were set out to give people the most calories for their money.

Next came a period when doctors believed that many illnesses must be treated by starving the patient—calories, they thought, fed the disease. Typhoid patients were, for many years, given only a few ounces of milk and some thin soup to cure a disease which we know, today, wastes body tissue very quickly, tissue that can only be replaced through good food.

Also, in the early days of this century, even ulcer patients were starved. It was not until 1914–1915 that doctors found that the best treatment for ulcers was food, and began to discard the starvation treatment for ulcers.

When doctors began to learn that they could not cure diseases by starving the patients, they went off at a new tangent. One physician has described this period as the day of "intestinal auto-intoxication", when many medical men were sure that most diseases could be traced to the poisons created in the body through eating meat and absorbed from the intestinal tract. A number of doctors took up



this particular hue and cry, and began preaching that protein was harmful and that a vegetable diet was obviously the thing.

All kinds of experiments were made. One of the most interesting was a personal test by Vilhjalmur Stefansson, the explorer, who lived for 11½ months in the Arctic on nothing but meat and fat. He managed to stay quite healthy and alert on this diet. Furthermore, Stefansson's observations, and those of other explorers, some of them doctors, showed that the Eskimos, who subsisted on an all-meat diet, showed no unusual amount of heart disease, high blood pressure, or kidney disease.

The next fashion in diet was vitamins (originally vitamines). These dynamic substances were discovered round about 1900 by a doctor named Christian Eijkman, who thought there was something in the bran layer of grain which protected the health of chickens—something that was not present when they were fed on milled rice. Dr Casimir Funk, in 1911, named the substance "vitamine" and recognized that some diseases could be caused by the lack of this vital substance.

The first vitamin was actually isolated in 1913 and named Vitamin A. Soon after, the "beri-beri" vitamine, or Vitamin B, was isolated.

The vital importance of vitamins was demonstrated in a dramatic fashion by the treatment of beri-beri and of pellagra. When the public found that rats could be kept stunted, although well fed, if certain substances were omitted from their diets, and when the newspapers printed the amazing results of treating beri-beri and pellagra with vitamins, it was easy to sell vitamins. Enormous drug companies grew up on the strength of their ability to synthesize or concentrate vitamins in pill and capsule form and sell them in large quantities. Hundreds of pounds' worth are sold over the counters of chemists' shops every year, and manufacturers now add them to flour which has been purified of its original vitamin content, and to milk as well as to other foods.

As with every other discovery in the field of nutrition, some scientists, some doctors, and most of the public went overboard! Vitamins were, and still are, the so-called password to health.

In this tide of excitement, two facts as vital as the vitamins themselves have almost been buried. The first of these is that vitamin deficiencies have nearly disappeared under the impact of a well-balanced diet. Today, scientist after scientist has developed and explained the fact that if you eat a well-balanced diet, you do not need vitamins except in special circumstances prescribed by physicians.



If you are getting an adequate and a well-balanced supply of vitamins in your food, it does you absolutely no good to take additional vitamins. Your body cannot store most of the vitamins.

There is another important fact that is just beginning to become known to the public; that is, that vitamins grown in food by nature are much better and more effective than vitamins bought in pill form. There may be times when a doctor has to prescribe synthetic vitamins—perhaps during pregnancy, or when the patient is deficient in certain vitamins—but the best way to maintain health is by eating the vitamins that nature grows for us. Buy them, as one doctor says, from your grocer, greengrocer, and dairyman, rather than from the chemist.

Even while the vitamin storm was sweeping the country, doctors continued experiments on rats and other animals to see what happened if they were deprived of proteins and the amino-acids which make up proteins. One amino-acid, they found, affects the amount of spermatozoa in the seminal plasma—in other words, affects the very fertility of the individual. Other amino-acids (there are twenty-two altogether) play various other key parts in maintaining your health.

There was a time when obstetricians used to warn pregnant women against eating too much meat. Now, to help their patients avoid eclampsia (the dangerous and sometimes fatal convulsions of toxæmia) many doctors prescribe the eating of large quantities of meat and other forms of protein.

Today, high-protein diets are used to treat cirrhosis of the liver, gastric ulcers, and to build up patients' strength before surgery. Patients who were not given large supplies of meat and other proteins before surgery took longer to heal, and the strength of the new flesh—as observed in rats—was only one-third as great as in patients who had eaten plenty of protein. Even bed-sores are more frequent in patients on low-protein diets.

Treating diseased livers successfully with protein is a new idea in medicine, as are many of the current uses of protein mentioned above. These new facts are stimulating to doctors' minds. They are made even more dramatic because they come after years of neglect or underrating or misunderstanding of the uses of protein. These two sets of facts—the long neglect and the new discoveries—tend to over-emphasize the true importance of protein in our diet.

So much is protein being emphasized these days that one important physician has named this "the protein era".

Now protein is important—vitally important—in everyone's diet. Make no mistake about that. But eating meat is not the answer to every nutritional problem—any more than eating calories or minerals or vitamins was ever the *complete* answer. Each of these nutritional discoveries has had its day in the sun, overshadowing the others. One day it was "eat your spinach", another "take your vitamin pills", and now it is "eat more meat".

The one thing that has emerged from all the new discoveries about food is that each has finally taken its place in the pattern of a balanced diet. The same, it may be safely predicted, will happen with protein.

Meat is certainly good for you, and you should eat it in generous amounts—no matter how old you are. But by itself it is not a safe diet for reducing, nor even the mainstay of a safe diet. It is one of the important ingredients in every well-balanced diet. And no substitute has been discovered for the well-balanced diet—for reducing, gaining, or keeping weight steady—or for maintaining health and vigour throughout life.

## 10. That "All-Meat" Diet

UNDERSTANDING the history of diet fads and fashions should give one a good perspective on some current experiments. And knowing the full facts about these experiments should enable you to realize just how applicable this research is to your own diet.

For example, there is a diet that is taken perfectly seriously by some doctors—but it has been over-popularized by many American magazine articles. It may be a good diet for its purpose, which is to treat hypertension as it is associated with obesity. It is being used with reported good success by the medical department of E. I. du Pont de Nemours and Company of Wilmington, Delaware, and also by other medical men.

However, some half-truths concerning this diet have become known to the general public and have encouraged a certain amount of fad dieting. The facts of the so-called "all-meat" reducing diet are given here in order that it may be seen in its proper perspective.

The du Pont doctors tried, through dieting, a radically new idea in the treatment of hypertension and related diseases. Part of their aim was to reduce the weight of their patients, but this was not always the primary aim, for they found in many cases that blood pressure might be reduced far out of proportion to the weight lost by patients.



The reason for giving you this medical detail is to clarify the purpose of the diet used by these doctors, and to place this diet in relationship with other diets. It is not primarily a reducing diet, although it has accounted for a good deal of weight loss for some people. It is a medical treatment for dangerous diseases.

It is more than a diet too. It is a regimen—that is, there are a number of specific actions and prohibitions that go with it. It was devised by Dr Blake F. Donaldson of the New York City Hospital, and is known as the Donaldson Regimen.

Here is the outline of the Donaldson Regimen:

1. Complete absence of salt from the diet; absence of all foods to which soda bicarbonate or sodium has been added.

2. Quantities of water are prescribed: at least six full glasses per day, in addition to water drunk at meals. Each meal is followed by a cup of hot coffee or tea without milk or sugar—or by a cup of hot water.

3. All foods to which patients are allergic are eliminated.

4. "The essential basis of the diet is fresh, cooked meat, both the lean and the fat. This must be eaten in the quantity of at least 8 oz. at each of the three meals of the day. Of this, 6 oz. must be lean and 2 oz. fat, cooked weight. There is no limit to the quantity of lean and fat meat which a person may eat if he chooses. The only guide to caloric intake is that of a person's appetite."

5. Most, but not all, dieters can eat an ordinary portion of potatoes, rice, or fruit with their meal, but some have to omit these or gain weight.

6. The dieter must be absolutely strict—he cannot depart one iota from the diet. Dr Pennington of du Pont says, "One drink of an alcoholic beverage will often stop all weight loss for one week."

7. A mysterious rule of this diet is that the dieter cannot stay in bed more than eight hours out of every twenty-four. If he stays in bed longer, he will lie there "in a toxic stupor" and will feel more tired than if he had got up after eight hours.

8. Physical exercise is a vital requirement of this diet. A businessman who spends most of his working day sitting down must walk for at least one half-hour daily; and he is advised to take that half-hour walk *before breakfast*. The theory is that this helps to take the bile salts out of the duodenum (part of the digestive tract) where they have accumulated during the night, and return them to the liver where they will do most good.



Dr Pennington of du Pont has quoted a number of cases in which the Donaldson Regimen was applied to patients with high blood pressure with excellent results. A typical case was that of a man aged fifty-eight in 1948, 5 ft. 9 in. tall, weighing 16 st. 7 lb., and with the very high blood pressure of 186/110. Nine years earlier he had been nearly 3 stone lighter, and his blood pressure then, at the age of forty-nine, had been normal. On the Donaldson Regimen, under a physician's direction, he lost 1 st. 12 lb. in six weeks. His blood pressure dropped to 126/86, which was normal. He stayed on the diet for six months until he was down to 12 st. 7 lb. and an excellent blood pressure of 114/68. Then he began to go back to his old eating habits. His weight went up to 15 st. 7 lb. and his blood pressure back to 152/90—distinctly high. If he does not reduce again, his doctor predicts the likelihood of an attack of coronary thrombosis.

Not all men on the Donaldson Regimen lost a great deal of weight. One, aged fifty-six in 1949, had a blood pressure of 166/104 and weighed 15 st. 12 lb. On the Donaldson diet he only lost 9 lb. in three weeks, but his blood pressure became normal at 126/84. Then he left the diet and began to eat only vegetables. For a while he continued to lose weight, but his blood pressure went up again. Then he went back to the Donaldson method and lost 1 st. 1 lb. in eleven days and his blood pressure went down to 118/76.

It is possible to quote other cases showing how the weight loss brought about by this specific diet went hand in hand with a lowered blood pressure. But this does not mean that everybody who is obese should attempt the Donaldson method of losing weight.

Remember, this is not a diet recommended to the general public. It has been given only by doctors to patients who were under constant care. And it is not primarily a reducing diet, but a regimen developed to treat certain diseases.

Also, there are many unanswered questions asked by the medical profession about this diet. What effect does so much fat have on producing ketosis (an excess of ketone, as is found in diabetics)? And what effect is there on the liver when the supply of glycogen is reduced by restricting the intake of carbohydrate? These are two important question marks against the diet, even when used to treat diseases. They make it even less desirable to use it as a reducing diet without careful medical supervision.

## PART THREE

# WHAT TO DO ABOUT OVERWEIGHT

### *11. Are You Really Overweight?*

BEFORE you contemplate reducing, you should ask yourself, "Am I really overweight?" Remember, as we grow older, our shape changes (we have all heard of middle-age spread), but this does not necessarily mean that we are getting fat.

True overweight, or obesity, can be defined as a condition in which a person weighs more than he or she should for his height and age. If the age is over thirty, the age factor can be ignored, for it is generally agreed that it is not healthy for the body to weigh any more than the desired weight at the age of thirty—no matter how old the person is.

There are charts on pages 47 and 93 which give the averages at different ages for different heights and builds, for both men and women. It is not necessary to conform precisely to this chart. There will always be individual differences; for example, there are some men of middle height who weigh as much as 230 lb. without being overweight. Perhaps they play professional football and have developed a great deal of muscle on unusually large bone structures. According to the chart they might be regarded as overweight, but not according to common sense. However, a non-athlete, the same size and same weight, might well be as much as 50 lb. overweight.

When you are overweight, the excess is fatty tissue—the stored residue of unburned calories.

A certain amount of fat is necessary to keep you feeling strong and looking well. Women carry more fat than men, because nature requires it for their female biological functions.

Also, a small amount of body fat is needed by both sexes as a reserve supply of energy. But a large amount of body fat is not needed by either men or women. In fact, it is not only unsightly but, as we have seen, extremely dangerous to the health of both males and females.



How much fat is too much? It is possible to measure how much fat your body is carrying, by checking your specific gravity—that is, by scientifically measuring the amount of water your body displaces. Thin people displace relatively more water than fat people, because bone and muscle are heavier than fat. However, it is not really necessary to go into such details. When you are fat, you can usually tell by the size of your hips or waistline—by whether or not you have increased in size in various places after you have stopped growing taller. You can check your weight from the charts on pages 47 and 93 to see how closely you conform to the normal for your height and age. But this check by itself can, as has been already said, be misleading. Common sense and a good look in the mirror will tell you quickly whether you are carrying unnecessary pounds of fat on your body.

The answer to “what makes me so fat?” is, in more than 95 per cent of cases, a simple one: too much food, or too much food of the wrong kind, plus too little exercise. There are many excuses or reasons: “my feet hurt” or “my back bothers me” (for lack of exercise), or “I just have to have my nourishment” (for overeating); but the truth always boils down to these two points.

“Is it glandular?” is a standard query by the overweight. The truth is again simple: no, it isn’t your glands. Until recently, many doctors believed that a small percentage of overweight cases could be accounted for by glandular disturbances. It was thought that perhaps 5 per cent of all obesity could be blamed upon glands. However, medical opinion no longer believes that even this small number of cases can be attributed to glands. There is now almost unanimous agreement that weight loss or gain over long periods is solely determined by the relationship of food intake to energy expenditure or activity. What is more, people who have been labelled “glandularly overweight” consume larger quantities of food than they need or their systems can handle.

It is possible that overweight may be caused by an organic disease which causes your body to misuse the food you are eating. So, if you are very much overweight—if, in comparing your weight with the desired weight for your height and age, you are more than 25 per cent above normal—see your doctor. Or, if you plan to diet drastically, don’t make the decision on your own—there may be some medical facts about your health, which only a doctor can discover, that could affect your whole diet.

In any case, even if it turns out that your doctor gives you nothing



but encouragement, you haven't lost anything. A good medical check-up of an overweight person, who is apt to be at that time of life when the body is in greatest need of medical attention and supervision, is never wasted. More and more, insurance companies and doctors are coming to believe in preventing illness through just such check-ups.

While self-diagnosis of any physical disturbance is always dangerous—even doctors go to other doctors to make sure about their own diagnoses—it is still true that most overweights do not need a doctor to tell them that they are fat, and are physically capable of withstanding the rigours of moderate dieting as outlined in this book.

Only if you are substantially above the average weight for your height and frame should you begin to worry about reducing. For younger folk, especially those under the age of twenty-five, a *few* additional pounds are not harmful; in fact, they may be helpful in combating the infectious diseases that are most apt to attack growing bodies.

However, even in adolescence a great deal of overweight is not desirable. While a few pounds of fat give the body additional reserves of strength, more than a few can be dangerous. It is only necessary to know that the highest relative mortality of any age group is among overweight young men aged twenty to twenty-nine. Even in these young people the burden of fat is deadly.

**TABLE FOR HEIGHT AND WEIGHT - WOMEN\***  
(Without Clothing)

Height (without shoes)		15-19 yrs.			20-24 yrs.			25-29 yrs.			30 yrs. and over		
		Slender Build	Medium Build	Large Build	Slender Build	Medium Build	Large Build	Slender Build	Medium Build	Large Build	Slender Build	Medium Build	Large Build
4	8	90	100	113	95	105	117	97	108	122	100	111	125
4	9	91	101	114	96	107	119	99	110	124	102	113	127
4	10	92	102	115	98	109	123	101	112	126	104	115	129
4	11	94	104	117	100	111	125	103	114	128	105	117	132
5	0	96	107	120	103	114	128	104	116	131	107	119	134
5	1	99	110	122	105	117	132	107	119	134	110	122	137
5	2	102	113	127	108	120	135	111	123	138	113	125	141
5	3	104	116	131	111	123	138	113	126	142	116	129	145
5	4	108	120	135	113	126	142	116	129	145	119	132	149
5	5	112	124	140	117	130	146	120	133	149	123	136	153
5	6	115	128	144	121	134	151	123	137	154	126	140	158
5	7	119	132	149	124	138	155	127	141	158	130	144	162
5	8	122	136	153	127	141	159	131	145	163	133	148	167
5	9	126	140	158	131	145	163	134	149	167	136	151	170
5	10	131	145	163	134	149	168	137	152	171	140	155	174
5	11	135	150	168	139	154	173	140	156	176	143	159	179

\*Table from Life Extension Institute of New York City.

## *12. Why You Are Overweight*

FAT knows no racial or climatic boundaries. It bulges South Sea Islanders and Eskimos in the same wrong places; it is found on the Dutch and on the Hindus—just as much as Americans and English. Obesity, or overweight, goes back to the caveman.

The first evidence we have of overweight is a statue of a fat woman known as the Venus of Willendorf, because it was found in the town of Willendorf in Germany. Since it came from a stratum of earth estimated to have been deposited some 22,000 years ago, we know that even in the late stone age there were those who had the problem of being too fat.

Hippocrates, the Greek whose oath of service is still the creed of every modern doctor, was probably the first to classify obesity as a medical problem. It was obvious even in his time that the problem was one of diet.

The first modern diet was established in 1864 by Dr William Banting in this country, and since then there have been many, many attempts to solve the problem of fat with some simple formula of food.

Surveys have shown, time and again, that overweight people eat more than they imagine. Fat people say, "I hardly eat a thing." They dislike admitting to gluttony. Also, they forget the extras they consume.

A woman of medium height and weight who does housework should be able to eat up to 2,400 calories per day without gaining a pound. The average active man can get away with up to 2,800 calories per day without gaining weight.

These are ample diets consisting of three proper meals a day, plus occasional snacks. Yet in studying 50 overweight people, it was found that they were eating 2,900 to 3,500 calories per day and were still hungry. One fat woman described herself as a small eater. An accurate measurement of her caloric intake proved that she was consuming 4,500 calories per day—enough for two people of her height.

Even without knowing a patient's metabolism (the rate at which he burns calories) it is possible to predict his weight loss, if the doctor is sure that he is eating only the prescribed number of calories. There is not enough individual difference in metabolism among people of the same age to affect this calculation by more than a few pounds.



It is based on the relation between a man's height, his total skin area, and his age. Thus, a thirty-five-year-old man who is 5 ft. 7 in. tall, and has a total surface area of 1.79 square metres, maintains a weight of 150 lb. on a daily intake of 2,415 calories. If he should suddenly increase his calories to 3,255—that is, if he eats 34 per cent more calories—he will gain weight. At first his weight gain will be rapid, about 1.7 lb. per week, but it will slow down after a while. It will stop altogether when he reaches a total weight of 300 lb. and a skin area 34 per cent greater than when he started to overeat.

The extra skin area precisely matches in ratio the increase in his rations.

This also works the other way round. If a thirty-five year-old man, 5 ft. 7 in. tall and weighing 300 lb., suddenly drops down on his food intake to 2,415 calories per twenty-four hours, he will begin to *lose* weight at the rate of 1.7 lb. per week. Later his loss will slow down and will stop, finally, when he reaches 150 lb. and a skin area of 1.79 square metres.

There seems to be a mechanism in the body which tends to regulate appetite and, therefore, body weight. The more most people eat, the more heat they produce. Fat people probably do not have a mechanism that works well—something that makes it harder for them to diet.

Overweight people usually have a basal metabolism which is above normal. Their circulations and respiratory systems are overloaded. "It is as if a motor-car engine were being used to drive a lorry," one doctor says, in describing a typical case. Just dieting alone will not reduce this load immediately. But usually when an overweight person has reduced to his desired weight, his metabolism, his blood pressure, and his other bodily functions have adjusted themselves to normal working rates.

Fat men and women like to think of themselves as glandular cases—it saves their self-respect. But there is, as we have seen, strong evidence that they are not; and equally strong evidence that fat people who are descended from fat parents are not fat by heredity alone. They have to overeat to gain weight, just like everyone else. Also, there is no reason to believe that fat people manufacture more fat than other people. They can lose weight, with proper treatment, as rapidly as their thinner neighbours.

Body build is inherited, true; height is inherited, and so, to a certain extent, is metabolism. But weight is something you create for yourself from the food you eat. Usually what is inherited are family food customs. Many families have a tradition of rich recipes, heavy

puddings, and large portions which has been handed down from a time when everyone's energy requirements were higher.

Drugs are occasionally used under doctor's orders to help people rid themselves of fat, but only in dangerous cases where it is necessary to force down the weight rapidly, in order to ward off a threatening heart attack or some other deadly occurrence. Thyroid extracts are seldom used, because they raise the rate of metabolism, and fat people suffer from that already. By raising the metabolism even higher, thyroid tablets may cause circulatory dangers.

The use of amphetamine sulphate (Dexedrine) is approved of by many doctors for the medical treatment of obesity. Even so, doctors use it discriminately, and insist that it should never be taken by those other than to whom it is prescribed.

But such popular means of losing weight as special laxatives, sweets before meals, glucose between meals, high colonic wash-outs, reducing soaps, electrical treatment, seaweed and iodine baths are all useless, and can be dangerous.

*The only cure for fat is less eating.* Some slight exercise will help to tone up the muscles and aid digestion, but too much exercise will increase your appetite. Exercise will not reduce anyone—you have to walk 36 miles without eating to lose one pound of fat. Nor will exercise or localized massage reduce the size of any one part of the body. Incidentally, the surgical removal of fat (not an uncommon procedure in America) is dangerous. Healing is often delayed, and there is a danger of a fat embolism (clogging of the blood stream by fat cells). In extreme cases, after massive losses of weight, it may be necessary to undertake plastic surgery to tighten the large folds of skin. But this is a rare condition, and not a problem that concerns the average dieter.

### *13. Diet : There's a Reason*

ULTIMATELY, the problem of overweight is one of simple mathematics. Your body is, in this sense, a kind of calculating machine. What you put in is food. What you take out is energy. What is left over is either waste or fat.

All reducing diets use the same method of making you lose weight—they cut down on your food intake.

One doctor puts it this way: "The obese person's weight can be



# AVERAGE CALORIES USED IN VARIOUS ACTIVITIES

Activity	Calories per hour per lb.	Calories per hour per 125 lb.	Calories per hour per 160 lb.
Bowling	1.75	218.75	280.00
Cooking	0.87	108.75	139.20
Dancing	2.10	262.50	336.00
Dishwashing	0.87	108.75	139.20
Dressing, undressing	0.71	88.75	113.60
Driving a car	0.92	115.00	147.20
Eating	0.67	83.75	107.20
Gardening	1.06	132.50	169.60
Golf	1.75	218.75	280.00
Ironing	0.87	108.75	139.20
Knitting	0.70	87.50	112.00
Laundry work	1.10	137.50	176.00
Lying in bed awake	0.47	68.75	75.20
Painting furniture	1.20	150.00	192.00
Playing piano	1.16	145.00	185.60
Reading aloud	0.63	78.75	100.80
Sewing	0.67	83.75	107.20
Singing	0.74	92.50	118.80
Sitting quietly	0.60	75.00	96.00
Sleeping	0.40	50.00	64.00
Standing relaxed	0.63	78.75	100.80
Sweeping with carpet sweeper	1.25	155.25	200.00
dust mop	1.02	127.50	163.20
vacuum cleaner	1.78	222.50	284.80
Swimming	3.02	377.50	483.20
Table tennis	2.65	331.25	424.00
Typewriting	0.85	106.25	136.00
Walking	1.81	226.25	289.60
Washing floors	1.06	132.50	169.60
Writing	0.67	83.75	107.20



reduced by forcing him to burn his own body fat. This is accomplished by curtailing the intake of food and, through exercise, by the increasing of its utilization. Both should be done judiciously and with due regard for physiological laws. Therefore, in restricting the food, precaution should be taken to guard against: (a) protein loss; (b) mineral and vitamin deficiency; (c) the distress of great hunger; and (d) profound weakness."

Following the facts in this book will help you reduce and still avoid this doctor's four bugbears.

People differ in their food needs just as tall and short people require different-sized clothes. Many factors go into the determination of individual food needs, but for practical purposes we may consider chiefly size, build, and activity. In extreme climates, temperature also has an effect. It takes more food to keep warm in a cold climate, fewer calories in a tropical area.

A large person requires more food than a small one, even though the daily activity of each may be almost identical. A person of tall, slender build, with little fat in proportion to active muscle tissue, may require more food to be well nourished than her short, plump friend whose frame is of the small-boned, easily "padded" type.

In addition to size and build, activity is a measure of the amount of food we should eat. Since the energy for bodily activity is furnished solely by the food we eat, it is obvious that a labourer needs many more calories (6,000) in a day than a man who works in an office (2,500); a housewife who does most of her own cooking, cleaning, washing, and caring for her family uses her muscles a great deal every day, and, of course, burns up a great deal more than her office working friend who is not fond of exercise.

Calories in food are turned into units of heat by your body. They are what keeps your temperature up to 98.4° F. and gives you the energy to live, move around, work, and play. Without calories in your diet you would not live for more than about forty days.

Then, too, food is burned internally for a variety of vital bodily changes which go on in all of us—for breathing, heart-beating, and chemical changes in our cells. Energy consumed in these basic vital functions is called the basal metabolism. These activities continue as long as life exists, and they can only go on because of the food which is burned within us and utilized as fuel or energy for the particular bodily function.

We talk a lot about "burning" food. The burning process is

identical with the more spectacular kind that takes place in your kitchen stove—they are both oxidization. In one case coal or coke, in the other case food, is oxidized to extract from it the heat or energy (they are the same thing) which the fuel contains.

Your body is much more efficient than any kitchen stove. It wastes nothing that it can use. So, when it burns food, it turns it into energy for the bodily processes described above, or it stores it in a form that can be reconverted into energy at some later date. This stored energy is, as we have said, fat.

In order to burn excess body fat, it is always necessary to diet. Dieting means giving up some food—but not too much. You must eat a minimum number of calories to keep your body functioning and to give you enough energy to work. Dieting does not mean fasting or skipping meals. *A sound reducing diet requires a minimum of three meals a day.*

Doctors agree that a reducing diet, and especially one not under constant medical supervision, should not be too drastic. It should include a minimum daily caloric allowance of 1,200 to 1,300 for women, and 1,600 to 1,700 for men.

The dieter must be careful not to undereat to the danger point, especially if, like most of us, he or she has to work for a living. Extensive experiments on factory workers have shown that no one can keep up with his work if he starves himself. He is just too tired. The Germans found this out when they kept a large corps of workers in the Ruhr mines on short rations from 1939 to 1944. Coal production fell drastically, even though they had many more workers in the mines. The starvation diet cancelled any attempt at increased production.

The dieter has to understand the difference between hunger and appetite. Hunger is a hollow, empty feeling in the stomach. Appetite is the desire for pleasure from food and drink. The former occurs only when the stomach is truly empty and when the blood sugar is low; the latter, since it is psychological in origin and can be brought on by the sight, sound, discussion, or even the memory of food, has no relation to bodily need.

After eighteen hours of fasting, true hunger is at its peak, but one's appetite may be in high gear an hour after a big meal.

It is possible to diet and lose weight without being hungry. Your appetite may work overtime. You may find yourself thinking more and more about delicious sweets, stuffings, sauces, gravies, fried foods, and all the other foods rich in calories that you are giving up,



but your body does not require these things as long as it is getting enough calories and nutrients. Your mind may tell you that you are hungry—but this is not true hunger, only appetite induced by habit, or nostalgia, or any of a number of emotional or social factors.

## *14. Calories and Reducing*

You have been reading and hearing about calories ever since you were old enough to notice such things. Yet you may never have heard the proper definition of a calorie; and you may wonder what calories have to do with your diet.

Here are the answers to these two basic questions. A calorie is a unit of heat. It was developed as a standard measure of heat so that scientists all over the world would know what other scientists were talking about in discussing heat; just as there are standards for measuring length, or temperature, or electricity. The scientist's definition of a calorie is the amount of heat needed to raise the temperature of one kilogramme of water—roughly a quart—one degree Centigrade in temperature.

All foods contain calories—all except plain water, fat-free clear soup, plain tea, and plain black unsweetened coffee, or saccharin. Your body consumes these foods, turning the calories into energy. It also extracts the nutrients from foods—a subject we will deal with in another chapter.

To measure the calories in food, scientists have developed a device called the Bomb Calorimeter. In this steel cylinder, which is filled with oxygen, carefully measured amounts of various foods are burned. The fire is started by an electric spark, and the heat generated inside the cylinder is transmitted to a precisely measured quantity of water surrounding the Calorimeter. By measuring the degrees of change in the water's temperature, scientists can tell precisely how many calories there are in various foods and in the pure forms of fat, protein, and carbohydrate.

A single gramme of carbohydrate (sugar or starch) gives off 4 calories.

A single gramme of protein (meat or egg) gives off 4 calories.

A single gramme of fat gives off 9 calories.

Now see how these facts are applied to analysing the caloric

contents of the food you eat. First the quantities of fat, protein, and carbohydrate are worked out through chemical analysis. The rest is a simple matter of multiplication.

For example, a glass of milk—8 oz.—contains by chemical analysis:

- 12 grammes of carbohydrate
- 8 grammes of protein
- 10 grammes of fat

Multiplying by our caloric values, we get 48 calories for the carbohydrate, 32 calories for the protein, and 90 calories for the fat—a total of 170 calories in a glass of milk.

It is obvious, then, that if someone wishes to eat less calories and still get the benefits of milk, he should drink skimmed milk—milk with the fat removed—thus saving himself about 90 calories per half-pint. Buttermilk is another possibility, although this may have slightly more fat than skimmed milk.

There are extensive tables (see pages 81 to 84) of the caloric content of foods in this book. These are intended as guides to eating, but in most cases they cannot be precise measures of the food you eat. For one thing, they are measures of food portions weighed on precise laboratory scales. For another, they are measures of foods other than the ones you are eating.

As an example, the caloric measurement of a medium-sized potato was 85 calories. This was a particular potato—not the one you are going to eat. And the determination of what constitutes medium size is subject to a certain amount of individual opinion. So you cannot count on the medium-sized potato you select as containing 85 calories. However, for practical purposes, the measurement is close enough to guide you in limiting your caloric intake.

In finding some measurement of the number of calories your body requires to see you through the next twenty-four hours, you can start with the fact that scientists have worked out how much each pound of your body requires in the way of heat and energy for basal metabolism and average activity. The figure is a variable one—10, 11, or 12 calories per pound of body weight.

If you multiply your body weight by 12, you will get the average number of calories you can eat in a single day and remain the same weight.

By the same token, if you multiply your *desired* weight (selected from the chart) by 10, 11, or 12, and eat only this number of calories,



you will lose weight (providing you are overweight) until you reach your desired weight.

Here is how you choose the proper number:

Choose the higher limit (12 calories per pound) if you do not wish to reduce too rapidly—for example, in situations such as the following:

If you have to travel any considerable distance to work.

If you perform regular exercises or take part in any strenuous sport.

If you have household responsibilities in addition to your daily work.

If you are of a tense or highly-strung temperament.

If you are subject to frequent colds, fatigue, etc.

Or, if you are excessively (20 to 25 per cent) overweight, and a sudden drastic reduction in the amount of food you eat might be very difficult, involving definite changes in meal plans, a drastic curb on your appetite, or mental distress.

You should also choose the higher figure if your normal duties involve some interruption of a regular food schedule, which might occur if your job involves a great deal of travelling, or if you have to take many of your meals in restaurants or cafés.

Following this line of reasoning, you can choose the 11 figure if none of the above conditions apply in your case, or if you feel you can do without food more easily. And, finally, select the 10-calorie-per-pound average if your life is easy and your will-power is good.

Thus, if your desired weight is 130 lb., you will find you can eat  $130 \times 12 = 1,560$  calories, or  $130 \times 11 = 1,430$  calories, or  $130 \times 10 = 1,300$  calories per day, and still reduce to your desired weight. Obviously, the fewer calories you eat, the quicker you will reduce—but if your desired weight is 130, you must not eat less than 1,300 calories per day.

Still assuming a desired 130-lb. weight—supposing that as a typical business girl you burn about 2,000 calories per day. But you are eating only 1,300 calories. The difference is 700 calories—and these must come from somewhere. Since you do not provide them in the form of food, your body provides them from its store of fat-calories.

Thus, you burn 700 calories from your own body fat in the course of a single day on a 1,300-calorie diet. As we know, fat burns at the

rate of 9 calories per gramme. So, in one day, you burn up about 78 grammes of stored body fat, or about  $2\frac{3}{4}$  oz.

Ideally, you should be able to detect this weight loss by weighing yourself at the same time each day. However, there are other factors which may influence your weight from day to day. So diet-experienced doctors say you should not weigh yourself more than once a week. It should always be on the same scales and at the same time of the same day of the week.



## PART FOUR

# WHAT EVERYONE SHOULD KNOW ABOUT FOOD

### *15. Why Eat a Balanced Diet?*

"NUTRITION is the most important single environmental factor affecting one's health," says one medical authority. The kind of food you eat, in other words, is even more important to your existence than the kind of air you breathe. More good—or ill—health can be traced directly to food than to any other of the outside factors surrounding your existence.

There are at least sixty nutrients or chemical compounds in food that probably play some part in keeping you alive. Without giving all the long chemical names—which include such strange words as isoleucine, phenylalanine, hydroxyproline, as well as such recognizable ones as iron and zinc—it is sufficient to say that the nutrients can be listed as (1) protein, (2) fat, (3) carbohydrate, (4) minerals, (5) vitamins, and (6) water. All these nutrients are present in foods, but not all are present in all foods.

It is theoretically possible—but only theoretically—to form a balanced diet out of chemicals. In actual practice, we get the nutrients we need out of food, and they taste much better that way.

The trick is to combine the foods you eat in such a way that you get all these nutrients. This is not such a difficult task as it sounds: in fact, it is quite simple. And the foods you eat need not be merely nourishing: they can, and should, be as appetizing as possible.

You and everyone else must eat a balanced diet in order to obtain enough of all the vitamins and minerals that your body needs. If you do eat a balanced diet, it will never be necessary for you to take vitamin or mineral pills, unless these are specifically prescribed by your doctor in order to fight some disease, or assist in growth, or during pregnancy.

There is another important fact: nutrients do not work separately.

Some do not work at all unless they are taken in with others. For example, fat-soluble vitamins, that is, those that dissolve in fat, rather than in water. If you do not eat butter or bacon, or some other digestible fat, you will probably not benefit by these vitamins even though they are included in the food you eat.

The best way to get a balanced diet is to eat a *variety* of foods. Grain cereals are an economical source of calories, vitamins, and minerals, but they are low in an important part of protein. However, if you eat cereal with milk, you get the essential protein that makes the whole dish not only taste better but do more for your health.

Almost everybody has accepted the idea that if you drink orange juice in the morning you are ingesting a large portion of health. And this is true, up to a point. But even something as healthy as orange juice is not indispensable.

Tomato juice, ounce for ounce, has only half as much vitamin C as orange juice. But tomato juice has fewer calories—an important fact to dieters—and contains carotene, a substance which your body can turn into the very important vitamin A. By varying your orange juice with an occasional tomato juice, you are livening up your diet, and your liver, at the same time.

Some people swear by prunes in the morning. All you have to do is to look at their wrinkled, honest faces to know that prunes are a good reliable fruit. And they are. They don't give you as much vitamin C or A as tomatoes, but they do give you a good dose of iron and copper, in a form which your body needs.

So—try orange juice one day, tomato juice another, and prunes a third. And then you will be getting a good quota of vitamins and minerals.

It is possible to induce many diseases by withholding some essential nutrient from the diet. But eating a well-balanced diet will provide all the nutrients anyone needs.

Iodine deficiency was quite common, as we have seen before, until a percentage of iodine was compulsory in all table salt. Ordinarily, iodine occurs in vegetables which are grown in a soil containing iodine; and it is found in ample quantities in all sea foods. People who get neither iodine-containing vegetables nor sea food can quickly develop an iodine deficiency. This affects the working of the thyroid gland—general sluggishness, low metabolism, and sometimes even a goitre.

Most people do not usually regard water as a food, but it is an



essential part of any diet. In fact, you can live for weeks on nothing but water—but you could live only a few days with nothing but solid foods.

From water you get, in many cases, important minerals such as calcium (in hard water) or fluorine (which is sometimes added to water to prevent tooth decay). Most of the stuff from which your body is made has to dissolve in water before it can turn into tissue. So you cannot do any body-building without water. Water is also your built-in "air-conditioning" system, as you may notice when you start sweating on a hot day. And scientists say that as you lose water through your pores, your lungs, and various other ways in large amounts, you have to drink at least six glasses daily simply to keep in balance, even when you are reducing.

One thing that some diets ignore and others rely on too much (as we have seen) is fibre. It is not a food, in the sense that your body absorbs it and uses it. Rather it is a kind of mechanical pusher and internal exerciser. It keeps the muscles of the intestine working, and it helps the small intestine to absorb the nutrients out of food. It also aids elimination; but this feature can be overdone, and often is, in fad diets.

We all—rich and poor, old and young, male and female—need fibre and all the nutrients to keep alive and healthy. Take away carbohydrates and fats, and you are not left with enough energy to move around. Take away ascorbic acid, and you get scurvy; and omit such B vitamins as thiamine, niacin, or B<sub>12</sub>, and you end up with, respectively, beri-beri, pellagra, or pernicious anaemia.

You may have to reduce because you are overweight; or you may have to gain weight for the opposite reason; or your weight may be ideal, and you should keep it that way. But you can do none of these things and remain healthy, strong, and vigorous if you do not, at the same time, eat a balanced diet.

In this chapter we have said everything any non-professional needs to know about the sources of vital nutrients. The next chapter will show you how to obtain these nutrients in your daily diet. There is no mystery here—or black magic. And there is no claim—for no honest person can make such a claim—that eating any single food, or group of foods, will add years to your life.

## 16. *What Everyone Must Eat*

NEW facts are being discovered constantly on food and nutrition, and new substances are being found—a good recent example is vitamin B<sub>12</sub>—which should illustrate that we do not yet know all there is to know about the subject.

Actually, with rare exceptions, new discoveries generally amplify what is already known. Except for the changed attitude towards protein in the treatment of disease, most current research does not conflict with what we have already learned.

For a long time now, we have known what the foods are that everyone needs; we know what substances these foods contain; and we know what good these nutrients do to our bodies. It is interesting to note that these foods are all readily available at your grocer's and butcher's, and that none of them is either unique or expensive.

The basic foods in our diet are called the Foundation Diet. Together the minimum portions of foundation foods add up to only 1,200–1,300 calories—a total on which an adult can reduce weight. All foods in the Foundation Diet contain several nutrients, but each of them has a larger amount of one or two nutrients than it does of the others. For this reason we have divided the foods in the Foundation Diet into groups. The foods in each group are interchangeable, so that no single food is indispensable, but each group *is* essential. Only by carefully selecting substitutes from other groups of foods that compensate for the omitted group can we afford to skip one entire group of foundation foods.

Each group of foods supplements the other. Many offer the same basic nutrient in different combinations (there are exact mathematical calculations of the amounts of each nutrient in each food, but to list them all would be merely confusing). Therefore, their benefits overlap. None fills the bill of good health by itself. All together, however, these foods are enough to keep you healthy and active, to keep you looking and feeling well.

Some of the benefits of eating our balanced Foundation Diet are:

A soft, clear skin.	Glossy hair.
Endurance in work and play.	Lustrous eyes.
Quick recovery from illness,	Steady nerves
accidents or surgery.	Plenty of vitality.
Strong bones.	Healthy blood



Good teeth.  
Tough nails and hair.  
Less muscular fatigue.

Sound gums.  
Easy, regular elimination.  
No unpleasant body odours.

What are the foundation foods, and what do they do? They consist of meat, eggs, fruit, vegetables, milk and milk products. They contain in various proportions some or all of the 55 or 60 nutrients needed by your body every day, for growth, development, repair, and activity—in other words, for living.

First on our list of foundation foods are:

### MEAT, POULTRY, FISH

These foods contain protein, which builds muscles and which is also found in every cell of your body. So these foods are vital for repair and to maintain health in all your body tissues.

They also contain iron, which is as important in your body as it is in building a motor-car. The red cells in your body, which do the very vital work of carrying fresh oxygen to your tissues and removing the carbon dioxide, the by-product of consuming food, depend upon iron. If your body lacks iron, you will lack vitality. Getting tired easily and having a poor appetite are two ways your body says, "I need more iron."

This group of foods also contains a good proportion of B vitamins, which help to maintain a healthy nervous system. B vitamins are even more essential to youngsters, since they are needed for growth.

There are some substitutes for meat, fish, and poultry, but except for eggs, these are not completely satisfactory. The other alternative foods are dried peas, beans, and nuts. They contain good amounts of protein, but with the exception of eggs, the protein is not of as good quality as that found in meat, fish, and poultry.

You should eat daily at least two moderate servings of meat, fish, and poultry—totalling 8 oz.

### MILK AND MILK PRODUCTS

Second on our list of vital food is milk, which has been called "the most nearly perfect food". In relation to the calories it contains, milk has more essential nutrients than any other food. It is the indispensable food in both infant and adult diets, although the latter need less of it than do growing children.

Grown-ups need a minimum of two glasses (1 pint) of milk each day, or equivalent amounts of skimmed milk, buttermilk, cream cheese, or milk soups.

The one thing that milk contains in largest proportions is calcium. No other food or foods, in amounts ordinarily eaten, will give you anything like the amount of calcium which you obtain from milk. Also, milk is the most economical source of this vital substance.

Why do you need calcium? You need it constantly to replenish the supply of this material in your bones, teeth, hair, and nails; also, it is vital for effective coagulation of your blood (so that you stop bleeding after you cut yourself, or after a surgeon operates on you) and calcium is necessary to help your muscles contract and relax.

Calcium is also needed by your body to help the other minerals do their best work. For example, calcium gets so much more out of other minerals that when you have enough calcium you can get along with considerably less iron.

A calcium deficiency, which is the most widespread deficiency in a generally over-fed population (because most adults do not drink enough milk), manifests itself by a feeling of lassitude.

Milk also contains generous amounts of protein and the B vitamins, the same nutrients found in meat, as well as a great many other vitamins and minerals. Children and adolescents need a minimum of one quart of milk every day.

## EGGS

Third in our Foundation Diet pattern is an egg—at least one every day. It makes no difference whether you eat it boiled, fried, or scrambled; a hard-boiled egg is just as nutritious as one that is soft-boiled or poached.

Nutrients in eggs are the same as in meat, poultry, and fish, except that eggs are a better source of iron than any other food. Generally, about twice as much iron must be taken in food as is actually required by the body, because a considerable part of the iron in iron-containing foods never becomes absorbed into the blood. For example, whole wheat contains a great deal of iron but only about 40 per cent is usable. However, the iron in egg-yolk is 100 per cent convertible by your body.

Eating egg (or eggs, where they are used as a meat substitute) gives the same benefits as eating meat, fish, or poultry.



## BUTTER AND FATS

The fourth group of foods which are vital in daily living are fat, butter, and/or margarine. Most reducing diets and dieters imagine that they should omit these fats, because fats contain more than twice as many calories as sugars, starches, and protein. Yet a basic minimum of three teaspoons of butter or enriched margarine is necessary for their vitamin A content and their fat content.

Vitamin A, a fat-soluble vitamin, is necessary to keep your skin and mucous tissues in a healthy state. It is necessary for the proper working of your eyes. It increases your resistance to certain infections. Vitamin A has an extra importance for the expectant mother and her child. Formation of sound tooth enamel—which begins in the unborn foetus—depends on the mother having an adequate supply of vitamin A during pregnancy. Vitamin A is also vital for the proper growth of the child before and after birth.

The fat content of butter and margarine is necessary even to those who want to lose weight. Fat is needed for the lubrication of the bowel and skin, as well as to dissolve vitamin A, so that the latter can be absorbed by the body. Fat is also necessary for proper digestion and utilization of food. It helps to give you a feeling of satisfaction after a meal, and it delays the onset of hunger by slowing down the digestion of other foods.

You should eat, even when reducing, the minimum of three teaspoons (or pats) of butter or enriched margarine every day.

## FRUITS AND VEGETABLES

The next large and important group of foods is vegetables and fruits. These may be tinned, frozen, or fresh—all forms have good vitamin and mineral content. Care must be taken in cooking fresh vegetables, however, to see that they are not overcooked or allowed to soak too long in too much water (see Appendix A—Cooking Hints). The best way to cook them is quickly, in a minimum of water and without the use of baking soda.

Vegetables and fruits provide the necessary fibre, which is not absorbed by the system, but is used as a pusher to help move food and waste through the digestive system. Tinned vegetables have a full quota of nature's vitamins and minerals preserved through modern canning methods. Tinned fruits, other than the citrus

variety, are not quite equal in vitamin C content to fresh fruits, although they are valuable for the diet in other ways. The final word has not yet been given on vitamins and minerals in frozen foods, but the evidence is all to the good—that frozen fruits and vegetables probably do provide the same vitamins and minerals as are contained in fresh food.

Green or yellow cooked vegetables contain vitamin A, iron, and B vitamins—all three essentials whose benefits have already been described. You need two moderate servings of these vegetables every day.

## RAW VEGETABLES AND CITRUS FRUITS

Vitamin C, another food *must*, comes from raw vegetables and citrus fruits. Uncooked cabbage and crisp fresh green salads are excellent sources of the C vitamin. Fresh or tinned citrus fruits or fruit juices are the best sources of vitamin C—next best are tomato juice, melon, and strawberries.

Vitamin C helps to keep your blood vessels in a healthy condition and to keep your teeth sound and your gums healthy. Eating plenty of vitamin C foods each day is also a good insurance against tender joints and fragile bones. Also, together with vitamin A, vitamin C lessens the susceptibility to certain infectious diseases.

Eat plenty of vitamin C *daily* in your portions of raw vegetables and citrus fruit (one of each).

## POTATOES

Another necessary daily food is one medium-sized portion of potato. Potatoes are a good source of minerals and vitamins (though less so when fried), especially vitamin C. Because most of the vitamin and mineral content of potato is just under the skin, the maximum supply of vitamins is gained by boiling—not baking—potatoes in their skins and eating the skins as well.

## BREAD AND CEREALS

Your three daily servings of bread or cereals include the entire group of grain, flour, rice, dry and cooked cereals. There is a wide variation in the vitamin and mineral content of these products, depending on whether they are in the natural state, refined, or enriched.



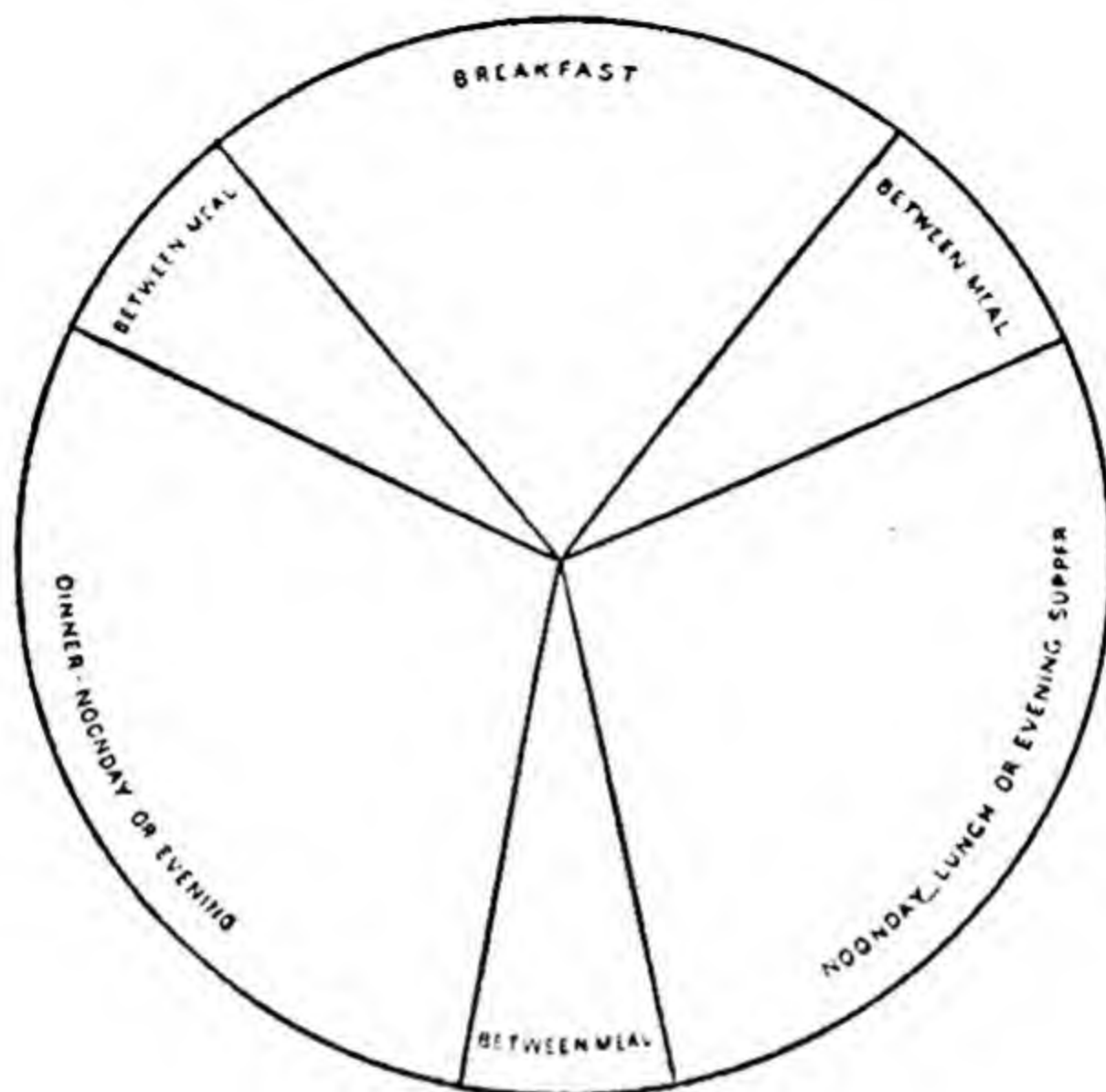
Most refined foods are enriched these days, making them equal to or better than the natural product, from the point of view of food value. To make sure that these goods are enriched you must make a point of reading the labels on the packet.

These cereals and grains are an important source of B vitamins, iron, and protein, all of which are vital to your health and energy. The total foods in our Foundation Diet contain the very least that you need in nutrients and in total calories in any day of your life. And it may be true in your case that you need much more than the minimum Foundation Diet to keep you healthy and active whilst you are reducing.

Notice that no special brands have been recommended, because no such recommendation is necessary. Notice also that there is an extremely wide range of choice. In fact, you will find on the list just about every food you can eat.

The Foundation Diet is the basic food requirement for everyone. People who want to reduce must eat all the foundation foods, but, of course, only a minimum quantity of those foods—say about 1,200–1,300 calories per day. The same foundation foods are the core of all sound nutrition—for people who want to gain weight or for those who want to maintain their present weight as well. For fuller lists of foundation foods, see Chapter 23.

# DAILY PATTERN OF GOOD MEALS



## FOUNDATION FOODS (1200-1300 Calories)

MEAT, POULTRY or FISH -  
2 moderate servings

MILK -  
2 glasses

EGGS - 1

BUTTER or MARGARINE -  
3 teaspoons or pats

VEGETABLES AND FRUITS -  
1 Potato  
1 Green or Yellow Vegetable  
1 Raw Vegetable  
1 Citrus Fruit  
1 Other Vegetable or Fruit

BREAD AND CEREALS  
3 servings.

Plus

OTHER FOODS  
(To complete total calorie  
requirement)

EXTRA PORTIONS OF  
FOUNDATION FOODS  
and/or

ACCESSORIES -

Sweets

Jellies and Jams

Cakes, Pies and Cookies

Soft Drinks and Sundaes

Mayonnaise

Whipped Cream



## 17. Some Dieting Hints

As you look over the Foundation Diet, you will find many foods not usually seen on popular reducing diets. "How," you may ask, "can I reduce if I eat all that every day? And, besides, isn't milk fattening? And bread and potatoes?"

Actually, it is the calories that make the difference in weight, and this safe reducing diet only adds up to 1,200-1,300 calories per day—which, it is safe to say, is considerably less than any overweight person has been eating. The foods have been chosen for their low caloric value and for their high nutritional value. They are rich in minerals, vitamins, and first-class protein (the kind that does you most good) and yet low in fat-producing calories.

Besides, no food, *in itself*, is fattening. Any food in an amount having the same number of calories as any other food will produce the same amount of heat, energy, or fat, as the case may be.

For example:

1 piece of Melba toast has 20 calories.

$\frac{1}{2}$  teaspoon of butter also has 20 calories.

And so has 2 tablespoons of milk—20 calories.

Therefore, Melba toast is not a "slimming food" nor is butter a "fattening food", except in so far as you eat more of one than another, in terms of calories. Yet some people think that Melba toast—which is merely dried bread, with only the moisture removed—is less fattening than butter.

Similarly:

1 very small potato has 42 calories.

$\frac{1}{2}$  medium grapefruit has 42 calories.

This should explode the idea that potatoes are fattening and grapefruit is slimming. In the ratio indicated above, both have exactly the same number of calories. Each differs in its nutritional content, as all foods differ, but in calories the two balance each other perfectly. If you eat half a medium-sized grapefruit instead of a small potato, you are not helping yourself to reduce, you are merely exchanging calories.

One way to save calories is on some essential food such as milk. In the discussion on calories, milk was used as an example, with the differences between whole milk, skimmed milk, and buttermilk illustrating what happens when you omit only the fat content.

Here is an example of the comparative amounts of nutrients found in different forms of milk:

Food	Approx. Measure	Calo- ries	Pro- tein (Gm.)	Cal- cium (Gm.)	Iron (Mgm.)	Vit. A I.U.	Vit. B <sub>1</sub> (Mgm.)	Vit. B <sub>2</sub> (Mgm.)	Vit. C (Mgm.)
Milk (whole)	2 glasses (1 pt.)	340	16.0	0.566	1.0	922	0.250	1.046	6
Milk (skimmed)	2 glasses (1 pt.)	160	16.0	0.586	1.4	48	0.216	0.960	6
Buttermilk	2 glasses (1 pt.)	160	18.0	0.504	1.4	6	0.156	0.748	6

Now, supposing you normally drink two glasses of milk a day. You change to skimmed milk or buttermilk instead. You get an almost complete group of protein, minerals, and vitamins—yet you save 180 calories. You can make up for the lowered vitamin A content of the skimmed milk or buttermilk by taking an extra portion of green vegetables without adding many calories to your meal. You need plenty of green vegetables anyway for, among other things, their laxative qualities.

This last is most important. Sometimes changes in customary food habits result in temporary constipation. Eating more vegetables and fruits, which have a relatively high roughage content, will help to avoid this condition. Fruits also provide a considerable amount of water, which is important in helping the body to get rid of waste materials efficiently. Also, fruits and vegetables contain certain minerals which have a regulating effect on your system. For all these reasons, fruits and vegetables are a necessary part of your diet. But we do not rely on them nearly as much as most fad diets do.

The meat, poultry, and fish on your Foundation Diet always mean *lean* meat, poultry, and fish. The crisp fat edges of roast beef and steak, the fat breast of duck, thick gravies, rich sauces, and the very oily fish such as mackerel, pilchards, and herrings are all "out" for the duration of your diet. All these things have too many calories in relation to their vitamin and mineral content to do you any good.

Fats must be used carefully in your diet. You do not eliminate fat, but you do restrict its consumption. Salads, for example, should be served with plain vinegar or lemon-juice dressing—rather than with mayonnaise or a great deal of olive oil.

Foods such as sugar, sweets, jellies, jams, soft drinks, cocktails, sweet desserts and pastries, whipped cream, fried foods, nuts, and other sweets must all be carefully restricted, if not completely eliminated. And second helpings of anything are not advisable. "Seconds"



are permissible, but if taken habitually, make it almost impossible for you to restrict your calorie total.

There is a rule that most of us learn at school in geometry lessons: "Things equal to the same thing are equal to each other." This is just as true of food as anything else. A glass of milk has 170 calories; and so have two teaspoons of peanut butter. You cannot say that peanuts are more fattening than milk if you eat them in approximately equal calorie portions.

What you can say is this: too many calories of any food or combination of foods, over and above your energy requirements, will gain pounds for you. Even a tiny amount of unneeded calories, say 100 calories—which might be eight to ten large potato chips, or an 8 oz. glass of beer, or two or three slices of bacon, or a piece of fudge—if *eaten every day for a year*, will put 8½ lb. of fat on your body. Such small amounts of food may go unnoticed in your diet, but your body counts every calorie.

A woman who expects to reduce by simply substituting one piece of Melba toast (20 calories) for a piece of white enriched bread (79 calories) saves 59 calories. Actually, this tiny saving in calories is too small to produce any weight loss, for it is too easily offset by small increases in other foods. No, the woman who loses weight after substituting Melba toast for bread has also made many other substitutions and sacrifices in her diet.

In speaking of foods to eat and to omit, we have talked in terms of total calories per day. Theoretically, you could eat all your calories at one meal if totals were the only consideration.

But your body is not just an adding machine, even though it contains a wonderful mechanism for adding and subtracting calories. Eat only when you are hungry. If you feed your body properly, then, you will feel the pangs of hunger less often and less severely—thus making it easy for you to stick to your diet.

Therefore, in skipping foods, one must never skip meals. Every dieter should eat at least three meals each day, and perhaps more. Four or five small meals are even easier to diet on than three larger ones.

## *18. Eat Breakfast and be Slim*

STRANGE as it sounds, skipping breakfast is no help to anyone trying to reduce. It never lowers your weight, and may actually put pounds on you.

Knowing this, the doctors of the large industrial corporation we mentioned before based their diet on a three-meals-a-day plan, beginning with an adequate breakfast.

It was somewhat startling to many women anxious to lose weight to be told that they would have to eat breakfast—even though they had been used to skipping the meal. One of these women, Mrs Ann Henderson, had not eaten breakfast for years. Yet she was nearly 40 lb. overweight when she started to work out her own diet.

She just could not believe that adding another meal to her day would actually reduce her, but it did. She began to eat breakfast and lost 5 lb. in one week. The doctors were concerned about this loss, because 2 lb. is the highest weekly loss that is regarded as safe. But they found that Mrs Henderson had dropped the 5 lb. because she had stopped eating snacks mid-morning and mid-afternoon and after dinner. Incidentally, after the first week Mrs Henderson's weight dropped less suddenly, but she did continue to lose weight steadily until she had lost a total of 38 lb.—all the while eating daily breakfasts.

Another girl, some years younger than Mrs Henderson, found the same thing about adding a third meal to her daily diet. Thelma Carpenter, who was 22 lb. over her desired weight, had not eaten breakfast for many years either. Yet there was all that overweight—she would try anything to get rid of the fat.

She too began eating adequate breakfasts, with excellent results. She no longer felt hungry at eleven o'clock, but could wait until noon for her lunch. And then she was able to get along on less food than before, without feeling any stabbing hunger pains.

But besides reducing, Mrs Henderson and Miss Carpenter both found that starting their day with a proper amount of balanced food made them feel more alert and livelier, made their morning more pleasant, and earned them compliments for doing their jobs better than before.

Many people, especially heavy smokers, or people who have not slept enough the night before, do not feel like eating breakfast when they wake up. "My mouth feels like the bottom of a bird cage," is the standard cliché. "I just can't eat a thing before eleven o'clock." In many homes where there are young children to take care of, the husband may go off to work without eating—or perhaps after nothing more than a cup of tea or coffee.

Experiments have shown that the thing that starts off a feeling of



hunger is the lack of sugar in your blood. Immediately after eating\* your blood-sugar level is high and you feel satisfied. A few hours later it has dropped and you begin to feel hungry.

Many people eat the largest meal of the day in the evening. This means that after your dinner, which is usually after six or seven o'clock, your blood sugar is at the high point of the day.

It is usually twelve hours before you eat again, if you do eat breakfast, and by this time your blood-sugar level is at its lowest ebb.

Now, blood sugar is related not only to hunger but to fatigue. When you run low on sugar, you feel tired and limp and your work suffers. If you start the day without adequate nourishment, you will not only feel strong pangs of hunger as soon as you really wake up—you will also feel listless and be inefficient at whatever you are doing.

A cup of coffee mid-morning is another common food habit which arises out of skipping or skimping breakfast. Coffee is a stimulant but has no food value. The small amount of milk and the sugar it contains provide you with nourishment, but not the right kind to substitute for a decent first meal.

Your blood-sugar level is also influenced by the kind of food you eat. Laboratory tests have shown that the carbohydrate foods—starches and sugars—do not stay with you as long as protein foods—cereals with milk, or eggs, or meat. So, calorie for calorie, you feel hungrier sooner after eating carbohydrates than after proteins. Furthermore, fat helps to slow down the digestion of carbohydrates and proteins. Fat in the diet, then, helps to maintain a more even blood-sugar level.

What all this adds up to is this: eating a big, well-balanced breakfast, heavy on the protein foods and with some fat, will make you alert during the morning and less hungry at lunch time. Your breakfast should ideally consist of fruit or fruit juice, cereal with milk, an egg and bacon, toast and coffee. While this breakfast contains some 200 calories more than a breakfast of coffee and toast or rolls, it will add fewer pounds in the long run, by keeping you away from "clevenesses" and a too large lunch.

If you have any doubts about this, take a look at the results of a scientific breakfast study made on a group of young women by several doctors. In this study the young women were given an 800-calorie breakfast—a very large meal—daily for several weeks. With this food inside them, they achieved a high level of mental alertness,

\* Blood sugar is controlled by the total food intake, not only by the amount of sugar in the diet. See Chapter 18.

work output, and low neuro-muscular tremor (the medical description of what happens to your muscles after exertion, a trembling that can be measured by instruments).

The same patients went without breakfast for several weeks. Their work output and mental alertness decreased, while their neuro-muscular tremor increased.

Then they were put on to one cup of coffee with milk but no sugar at breakfast time for several more weeks. The results were the same as eating no breakfast at all.

Finally they were given a 400-calorie breakfast. Then their work output increased, and their mental alertness, while involuntary muscle tremor decreased.

The interesting point was that the patients (who were of normal weight) showed no significant change in weight whether they ate no breakfast, or managed on black coffee, or started the day with 300, 600, or 1,000 calories. This included a free choice of foods at other meals.

A similar study made on men showed that the male of the species is, if anything, even more sensitive to going without breakfast than the female. Men complained more about hunger, and most of them suffered from dizzy spells or nausea after strenuous exercise.

The results of these and a number of other experiments showed that while skipping breakfast was detrimental, eating a decent breakfast was beneficial without causing a gain in weight. One general conclusion was that eating about 25 per cent of the daily calories in the morning made men and women somewhat more efficient than taking, say, 40 per cent of their calories first thing. And the latest research shows that the heavier the concentration of protein at breakfast, the longer it will satisfy you.

The above facts about breakfast were discovered by studying the physiological responses of adults between the ages of eighteen and thirty-five. Doctors were not satisfied to apply these results to older people, so a special study of men over sixty was made.

These men ate bacon and eggs for breakfast for a time, then cereal and milk for a further period, and they tried going without breakfast too. The results were the same as those found in younger people. Men over sixty were found to be as capable of eating a good breakfast as men of thirty-five, and they obtained the same benefits from the food. Also, it was found that for older people a caloric intake equal to 25 per cent of the day's food was the optimum amount to eat in the morning.



Eating properly in the morning is even more important to teen-agers and children than it is to older people. The metabolism of children is higher than that of adults, hence they consume food faster and feel its lack sooner. Not eating a decent breakfast can have a serious effect on a child's growth and health, to say nothing of his school work.

Yet according to studies made in 1946 and 1947, among 41,516 schoolchildren in various cities and counties, only 22 per cent ate a good breakfast, 37 per cent ate a fair breakfast, and 41 per cent ate a poor breakfast.

Similarly, in one teen-age study during 1948, it was discovered that 48 per cent of the older teen-agers either had no breakfast at all or ate a poor one.

Since eating is, among other things, a habit, the patterns of poor breakfasts set in children and teen-agers will persist in later life. So the time to combat the no-breakfast habit is in the young.

There is one more point about the alertness that results from proper nutrition in the early morning. Many men who drive to work, or who work at machines or in hazardous industries, require a high level of alertness for their own safety and the safety of those around them. Poor breakfast-eaters are not as alert as they should be: consequently they are more apt to suffer from morning accidents.

## PART FIVE

# DIET TO SUIT YOURSELF

### *19. Diet to Suit Yourself*

DOCTORS know that there are many things wrong with most standardized diets. Perhaps their biggest fault is that they seem to be worked out for people who can afford expensive foods, vitamins, etc., or who can spend their time without feeling the physical demands of having to do a day's work. Therefore, what is needed is a diet that will (a) add no extra cost to daily living, and (b) provide enough nourishment for working men and women to do their daily jobs. In addition, many women keep house too—which takes even more energy—and cook for their families. They have neither the time nor the inclination to prepare special dietetic foods, nor do they want to be isolated from their families by having to eat a different, unusual diet.

Bearing all these things in mind, Dr Manson and his staff of medical men, of the Bell organization, went to work to produce a diet that would allow the employees to reduce while working and living normal lives.

They went several steps beyond this. They wanted to create a diet that would be appealing, that anyone could stick to, without any great strain on the will-power—and that would be *permanent*.

This last word is the key-note to the real success of a diet. It is permanency of weight loss that is the real test of any diet. A food regimen that goes in for cycles of feast and famine, of long periods of overweight relieved by periods of quick reducing, is bad because it puts constant stresses on your body. The strain of quick reducing may be even greater on your health than the stress of constant overweight. So the ideal diet is one which first reduces you slowly to your normal weight, and then allows you to stay at your ideal weight for the rest of your life.

None of the fad or health diets do this. At their best, even when they work, they promise and perform the feat of losing 1 lb. a day or



5 lb. a week—for a short period of time. When the dieter has reached the end of the stated period of seven or ten or twenty-one days of dieting, he feels that he has done the job and can relax. Then he starts eating as he did before the diet, and is soon back where he was before he started.

It is a medical truism that weight quickly lost is almost invariably regained just as quickly. The net weight loss is nil—and frequently the dieter emerges from the experience with a few additional pounds to compensate for the frustration and hunger of a too severe diet. The result, in terms of upsetting one's digestion, and of lowering one's resistance, and increasing fatigue, may be real harm to one's health.

Bearing all these facts in mind, Dr Manson and his staff have devised a diet which does provide enough nourishment, yet reduces weight steadily and safely.

The rate of reducing was set at the safe limit of 2 lb. per week at the most. This rate, the doctors knew, was safe for several reasons. To lose 1-2 lb. a week, a person can still eat enough food not to feel starved. Loss of the 2 lb. puts no strain on the body—it is a gradual process which it is impossible to measure from day to day. Hence, only weekly weighings are allowed on this particular diet. A dieter who expects to see her body shrink from day to day will be disappointed—but weekly weighings will show a definite decrease. And, most important, the steady, gradual loss of weight is encouraging enough for the dieter to continue dieting, while the food intake is large enough so that the dieter need not feel deprived of anything.

Hence, on our diet, it is no rarity to find women losing as much as 55 lb.—but over a period of perhaps six months. And it is common to find the people who do lose weight staying slim from that time on.

In a sense, dieting to suit yourself is a never-ending process. It re-trains your food habits and your appetite into a pattern of eating that will first reduce you to your ideal weight, and then keep you at that weight for the rest of your life.

It is not a painful process, neither is it the easiest thing in the world. However, it has been undertaken and accomplished by hundreds of ordinary men and women who were anything from 10 to 100 lb. overweight. Any person of normal intelligence and application, and who is not a chronic neurotic or psychotic, can do the same.

Just reducing does not, of course, guarantee good health; nor, as stated previously, do a few extra pounds indicate dangerous over-

weight. It is always vital to remember that in eating, to reduce, or gain, or stay the same weight is not the only aim: good nutrition is essential. For while you may have to use your diet to change your weight, your body still counts on you to provide it with the 55 to 60 nutrients it needs to keep you alive, strong, and healthy. Many of these are not stored the way fat is stored by your body, but must be replenished daily.

Perhaps the most important single act you can perform in dieting is something you must do before you even start. This is to write down in the space reserved for the purpose (page 80) every bit of food you eat every day for one week. Then, next to each item, place the approximate calorie count, which you can work out from the charts on pages 81 to 84.

This is easy to do, if you remember to do it every day, or after every meal—even after snacks—and the result will probably surprise you. Very few people know how much they are eating; and this is especially true of overweight people. The more overweight they are, the less aware they are that they overeat. The majority of very fat people consider themselves light eaters, in fact. But when they add up their true diets they find, as we have seen, that they are eating 4,000 or 5,000 calories per day instead of the 2,000 or so that they really require.

After you have made an inventory of your food for a week, write down the diet you would like to eat—and stick to it. You should then start to lose weight.

Check your weight weekly, until you have reached your desired weight.

Then stop dieting.

This does not mean that you should go back to your old food habits.

Whether you are dieting or not, you must get a proper amount of food calories.

Whether you are dieting or not, you cannot afford to overeat beyond your activity level.

Once you have stopped dieting to reduce, you must construct a new kind of diet for yourself. Taking care to eat the Foundation Diet, you may add enough other foods in any amount or proportion that appeals to you.

With these facts in mind, you are ready to take the first step towards selecting your own diet. Look at the height and weight tables on pages 47 and 93.



Under the "Height" column pick out your correct height, standing without shoes.

Under the "Age" column pick out the age group within which your age falls.

Under the "Build" column pick out your correct frame, that is, whether you are of small, medium, or large frame. This depends on the breadth of your shoulders, width of your hips, thigh measurement, bone structure—circumference of wrists and ankles—and length of trunk in relation to total body height.

Now you have put your finger on what your desired weight should be.

The next thing you must find out is your percentage of overweight.

The way to do this is to get weighed on a reliable scale. If you do not possess a pair of bathroom scales, or do not belong to a "Keep Fit" class where you can weigh yourself without clothing, you must subtract the weight of your clothing from the weight. For women, the approximate weight of indoor winter clothing is 5 lb., and the approximate weight of indoor summer clothing is about 3 lb.\* These amounts should be deducted from your scale weight if you weigh yourself with your clothes on.

Now take the next step of working out your percentage of overweight.

First subtract what you should weigh—your desired weight—from your actual weight. For example:

My present weight with light clothing is 153 lb.

My actual weight is 150 lb. (deducting the 3 lb. for light clothing).

My desired weight, according to the chart, should be 131 lb.

Subtract 131 (desired weight) from 150 (actual weight), and you get the amount of overweight—19 lb.

Now, to find the percentage of overweight, divide the amount of overweight by your desired weight, in this case  $19 \div 131$ , and multiply by 100, which gives you the answer: 14.5 per cent overweight.

To find the amount of food you can eat and still reduce, multiply your desired weight by the multiples 10, 11, or 12—explained in Chapter 14. The result will be your total average caloric intake for a single day.

Now about dieting.

We have stated that the main cause of overweight for healthy,

\* Chapter 21 gives these figures for male clothing, as well as special facts on male diets.

normal people is too much food or food of the wrong kind. Usually the two go together.

For these people, it is necessary to reduce their food consumption before they can reduce their weight.

However, as I have said before, no self-administered diet should be less than 1,200 to 1,300 calories per day. This is a safe amount of calories for anyone who works for a living, or keeps house, or who is normally active. This is the very lowest minimum which doctors feel is safe.

*You make your own diet of the foundation foods in Chapter 16—the basic 1,200 to 1,300 calories that also supply you with a full quota of minerals, vitamins, proteins, and fat each day—plus anything else you want, within the caloric total you have worked out for yourself.*

That is all there is to making your own diet.

You will find a complete chart of caloric values on pages 81 to 84. Page 80 and page 140 have been designed to help you work out your diet limits, and to keep records of your diet and of your weight loss or gain.

Once you have performed the preliminary steps in dieting in this chapter, you are ready to diet. There is no middle ground, no waiting period. Once you have decided, *start dieting*. Immediately. Plunge into active food reduction—and you are on your way to losing weight.





Food	Amount	Calories
Almonds, shelled	1 cup	848
Apples	1 medium	76
Apple juice, fresh or tinned	1 cup	124
Apple sauce, sweetened	1 cup	184
Apricots, fresh	3	54
tinned in syrup	4 halves and 2 tablesps. syrup	97
dried, uncooked	1 cup, small	393
Asparagus	8 stalks	40
tinned	7 stalks	18
Bacon, grilled, medium fat	2 thin rashers	97
Bananas	1 medium	88
Beans, baked	3 tablespoons	129
butter	$\frac{1}{2}$ cup	131
fresh, string	$\frac{1}{2}$ cup (3 oz.)	12
Beef, lean	1 oz.	85
corned	1 oz.	69
Beer	$\frac{1}{4}$ pint	200
Beetroot	1 medium	21
Biscuits, plain water	1	37
Blackberries	1 cup	82
Blancmange, cornflour	1 cup	275
Brains, raw	3 oz.	106
Brazil nuts, shelled	8	226
Bread, white	1 thin slice	90
wholemeal	1 thin slice	85
Broccoli, cooked	1 cup	44
Brussels sprouts, cooked	9 medium	30
Butter	1 oz.	226
Cabbage, cooked	5 tablespoons	21
Cake, sponge	2-in. slice	117
rich fruit	1 piece	106
gingerbread	1 piece 2 in. x 2 in.	180
Carrots, raw	1 large	22
Cashew nuts	1 oz.	164
Cauliflower, cooked	$\frac{1}{2}$ cup	25
Celery, raw	4 stalks	15
cooked	1 cup diced	24
Cheese, cream	1 oz.	232
Cheshire	1 oz.	110
Camembert	1 oz.	85
Cheddar	1 oz.	120
Dutch	1 oz.	77
Gorgonzola	1 oz.	104
Cherries, raw	1 cup (stoned)	94
tinned	1 cup	122
Chicken, roast	$3\frac{1}{2}$ oz.	184



Food	Amount	Calories
Chicken, breast only	1 slice	60
tinned	3 oz.	169
Chocolate, eating	1 oz.	154
drinking	1 cup, large, with milk	239
Cider	$\frac{1}{2}$ pint	125
Cocoa	1 cup, large, with milk	236
Coconut	1 tablespoon	40
Cod Steak, steamed	$\frac{1}{4}$ lb.	90
Coffee, black		nil
Corn, sweet	1 ear	84
sweet, tinned	1 cup	140
Cornflakes	1 oz. ( $1\frac{1}{4}$ cup)	104
Crab, tinned or fresh	3 oz.	89
Cream, thick	1 oz.	115
thin	1 oz.	61
Cucumber	1 medium	25
Currants, red, raw	1 cup	60
Custard, baked	1 cup	283
Dates	3-4	93
Doughnuts	1	136
Eggs, raw, boiled, poached	1 medium	70
fried	1	120
scrambled or omelet	1 egg omelet	106
Endive	2 heads	9
Fat, cooking vegetable	1 tablespoon	110
Figs, raw dried	2	90
Ginger Ale	8 fluid oz. (1 cup)	80
Goose	3 oz.	276
Gooseberries	1 cup	59
Grapefruit, fresh	$\frac{1}{2}$ medium	27
tinned	8 sections	66
juice, fresh	1 cup	87
juice, tinned	1 cup	131
Grapes	12	39
Haddock, steamed	3 oz.	78
fried	1 fillet, 4 in. x 3 in.	158
Halibut, steamed	3 oz.	85
Ham, cooked	3 oz.	338
Heart	3 oz.	92
chicken	3 oz.	134
Herring	3 oz.	140
Honey	2 tablespoons	82
Ice-cream	1 oz.	58
Jam, strawberry	1 tablespoon	37
Jelly	1 oz. ( $1\frac{1}{2}$ tablesps.)	90
Kidneys, beef	1 oz.	35

Food	Amount	Calories
Kippers	3 oz.	180
Lamb, roast leg	3 oz.	173
chop	3 oz.	320
Lard	1 oz.	250
Lemon	1 large	43
juice	1 tablespoon	4
Lentils	1 oz.	105
Lettuce	1 small head	12
Liver	1 oz.	40
Lobster, tinned	3 oz.	78
Loganberries	1 cup	90
Macaroni, cooked	1 cup	209
Margarine	1 oz.	226
Mayonnaise sauce, fresh	1 tablespoon	92
bottled	1 tablespoon	58
Milk, whole	1 pint	380
skimmed	1 pint	200
condensed	1½ tablespoons	100
Mutton, roast leg	3 oz.	249
Olive oil	½ oz., 1 tablespoon	132
Olives	10 large	70
Onions	1 medium	17
Orange	1 medium	50
juice	half cup	56
Oysters	1 doz.	190
Parsnips, cooked	1 cup	94
Peach, fresh	1 medium	45
tinned	2 halves plus juice	91
Peanut butter	1 tablespoon	92
Pear, fresh	1 small	70
tinned	2 halves plus juice	86
Peas, fresh	3 oz.	54
dried, cooked	2½ oz.	76
tinned	3 oz.	72
Pineapple, fresh	1 slice	53
tinned	1 slice plus juice	90
Pork, loin chop, lean	3 oz.	222
Port	2-oz. glass	106
Potatoes, boiled	1 medium	97
chipped	8 pieces	157
mashed with milk	1 cup	159
Prunes	5	140
Quaker oats	1 cup	120
Radishes	7-10	12
Raisins, dried	1 cup	429
Raspberries, fresh	1 cup	70
frozen	3 oz.	84
Rhubarb	3 oz., approx. 1 cup	3



Food	Amount	Calories
Rice, boiled	$\frac{1}{2}$ cup	105
Salmon, fresh, boiled	3 oz.	171
tinned	3 oz.	117
Sardine	1 oz. (4 small)	84
Sauerkraut, tinned	1 cup	32
Sausage, Frankfurter	1	124
pork	4 oz.	510
Scallops, raw	4 oz.	89
Shortbread	1 piece, $3\frac{1}{2}$ in. x 1 $\frac{1}{2}$ in.	89
Shrimps, tinned	3 oz.	108
Soup, clear	8 oz.	16
tinned tomato	8 oz.	83
vegetable	8 oz.	42
Spaghetti, cooked	1 cup	218
Spinach	3 oz. (4 tablespns.)	21
tinned	3 oz. (4 tablespns.)	19
Strawberries, hulled	3 oz.	90
frozen	3 oz.	90
Stout	$\frac{1}{2}$ -pint glass	142
Sugar, granulated	1 teaspoon	20
Sweets		
butterscotch	1 oz.	116
caramels	1 oz.	118
chocolate creams	1 oz.	110
chocolate, milk	1 oz.	143
chocolate, milk, with almonds	1 oz.	151
Tangerines	1 medium	35
Tea		nil
Tomatoes, raw	1 medium	20
tinned	3 oz., $\frac{1}{2}$ cup	21
juice	3 oz., $\frac{1}{2}$ cup	18
Tongue	4 oz.	235
Tunny fish, tinned, including liquid	3 oz.	247
drained	3 oz.	169
Turkey	3 oz.	168
Turnips	3 oz.	9
Veal cutlets	3 oz.	183
Vinegar	1 tablespoon	2
Walnuts, shelled	12	219
Water		nil
Watercress	3 oz., 1 small bunch	12
Watermelon	1 wedge, 4 in. x 8 in.	120
Wheat, shredded	1	102
Wheatflakes	1 cup	125
Whiskey	1-oz. glass	100

## 20. *The Story of Mrs Marion Archer*

MANY people were interviewed when the efficiency of our diet was being checked. The story of Mrs Marion Archer is typical—a story which was vouched for not only by Mrs Archer herself, but by three executives in the firm for which she worked. Here it is, in her own words, and tells how she lost 18 lb. permanently, by making her own diet.

“When I was twenty-one,” Mrs Archer began, “I couldn’t seem to lose weight. But that was two years ago, before I discovered how to work out my own diet. Since then I have lost 18 lb., and dropped from taking clothes sized 16 to size 12, in spite of the fact that I have had a baby.

“Although I am down to 128 lb., I reduced without ever feeling hungry. My weight never changes more than a pound or two, and I am quite sure I shall be slim for the rest of my life.

“I learned all about dieting with five other girls—fellow employees. We met for an hour’s session every day after work. We learned all about what kind of foods to eat, and other things like that.” (Editor’s note: This information is in the preceding chapters of this book.) “And then we stood, one at a time, in front of the other members of the group, and we decided whether each of us was slim, medium, or heavily built.”

“The other girls decided that I was a medium build. According to my height, 5 ft. 7 in., I should have weighed 138 lb. Instead, the scales showed (and I had allowed 3 lb. for light clothing) that I weighed 146. Subtracting showed me that I was 8 lb. overweight.

“We found our percentage of overweight by dividing our overweight in pounds (in my case 8 lb.) by our desired weights (in my case 138 lb.) and multiplying the quotient by 100. The result showed that I was almost 6 per cent overweight.

“We were told that it takes between 10 to 12 calories per day just to maintain health for each pound of body weight. I am married and keep house as well as going to work, so I thought I could use the extra energy. I chose the multiple of 12. That multiplied by my desired weight allowed me 1,656 calories a day—the amount I could eat and still get down to 138 pounds.

“We were told about the basic minimum of 1,200 to 1,300 daily calories that would give us the necessary vitamins and minerals.



"On top of this necessary food, we could add any dishes we liked to bring ourselves up to our total calories.

"There was a pleasant feeling of freedom about giving ourselves this choice. The only real decision we had to make was to eat less, not to starve ourselves. I found it was possible to have a cocktail at a party, but I preferred wine. I could drink two glasses of port or sherry and only get 100 calories—the same as in a glass of beer or a single drink of brandy.

"Nobody would know I was dieting unless I told them. I didn't have to eat any 'special' foods, or be finicky. I could join any party without being obviously different from the others. Only my husband knew that I had gone without a pudding that night so that I could drink some wine at the party.

"The diet didn't bother Bob, my husband, who is 6 ft. 3 in. and weighs 210 lb. and enjoys his food. I never stopped giving him his favourite foods, which are mine too. I just ate smaller portions, that was all, or had extra portions of vegetables and cut down on the bread and butter.

"Bob didn't think I could lose weight without starving myself, but I did. I weighed myself only once a week, at the class. We were told not to weigh ourselves every day, because we might not see any progress, or might even show a slight gain which wouldn't mean anything. After the first week, I had lost exactly 1 lb. Only seven to go.

"The instructor asked us to keep a count of every calorie we ate for the next week, which would act as a guide. This is what I ate for one whole week from April 25th to May 3rd (inclusive). I really do mean 'inclusive'. We kept a note of every snack between meals and at bedtime and so forth.

"Thursday the 26th was a very low calorie day: two moderate portions of lean meat and fish (250 calories), one cup of milk (170 calories), one egg (73 calories), three teaspoons of butter (108 calories), one serving of green vegetables (40 calories), and one piece of fruit (68 calories). Altogether, only 1,031 calories for the day—600 less than I had worked out that I could afford to eat. I wasn't hungry, and I felt fine, but I knew I hadn't eaten enough.

"Friday I drank more milk, bringing my total milk calories up to 340. And I ate some raw vegetables. Total for the day, 1,205 calories—just over the safe limit.

"Saturday I spread out a little—drank an extra cup of milk, and had some mayonnaise on my salad. That sent me up to 1,402 for the day.

"Sunday I really controlled myself, in spite of a tempting dinner (cooked by me)—1,261 for Sunday, including a little extra meat for dinner and a piece of chocolate cake.

"Monday I repented, a little too strongly, for the cake—1,042 calories.

"Tuesday night Bob and I had arranged to go out with another couple. We went to an Indian restaurant, and I had curry, rice, vegetables, and ice cream. That was my one big indulgence of the week. I went over the target with 1,792 calories.

"Wednesday I began to toe the line again, perhaps because it was weighing day at the class. I ate only 1,452 calories for the day, including some macaroni at lunch. I just couldn't resist that macaroni.

"Even so, I had got through the whole week on only about 9,100 calories, or roughly 1,250 a day. Anyone can reduce on that, and I did.

"I felt tons lighter when I stepped on the scales. I was sure I had turned into a sylph, and I knew I had been virtuous. How many inches, I wondered, should I have to take in my clothes?

"The scales didn't tell me much. I had lost my second pound.

"After the second week, it became an unconscious habit to watch my food. I kept to my diet for eight weeks. At the end of that time I had lost 8 lb., and had reached my goal of desired weight—138 lb. I kept in touch with the other girls too. Ann Henderson had weighed 187 lb. when she started to diet. She kept at it with her husband's encouragement, until she was 158 lb. She had lost 29 lb. Jane Carpenter had started at 131 lb. She was much shorter than Ann—only 5 ft. 2½ in.—which meant that she had been far too heavy. She dieted down to 110. And stayed there. She is still 110 lb. today—two years later. The only difference is that now she has got a boy friend.

"As a matter of fact, I am even lighter now than when I stopped dieting. It happened because I became pregnant and put on more weight than I should have done. After my baby was born, I weighed more (148 lb.) than I had before I started to diet.

"What is more, I had left my job to take care of my baby. I was at home alone with no one to tell me what to do, and with the constant temptation of a well-filled larder.

"I knew that it wasn't Nature that had put on those extra pounds, though. I had overeaten—using pregnancy as an excuse—and it was up to me to get rid of them.

"I didn't want to start dieting too soon after pregnancy. I felt



weak, and had the extra burden of looking after little Gail and keeping house. But after three months I was ready to start losing those extra pounds that were making housework a burden.

"What worried me was: could I do it alone? I didn't know, but I had to try.

"When Gail was three months old, I got out my diet record and went over it. I set my goal, not at 138 lb. but at 135 lb. And I started right away on planned eating.

"I was surprised to find that it was actually easier to diet at home. When I was working we got two 'break' periods during the day, and there was a well-stocked canteen in which to spend them. It was almost impossible not to eat something.

"But at home, although there was plenty of food, I didn't have time to sit down and eat any of it between meals. When baby had her nap, I had dozens of things to do. And, as any dieter knows, if you can cut out eating between meals, you have already gone a long way to losing weight.

"It may be that I was burning up a bit more energy too. A day at home is certainly more strenuous—by about 500 calories—than working in an office. But I used to do housework even when I worked.

"The minute I started watching my calories at home, I began to lose weight at a rate of  $1\frac{1}{2}$  lb. a week. I didn't starve myself, and had a sweet every now and then, and even cooked fried pork chops occasionally. I just watched the total calorie intake, and my fat began to disappear.

"I worked out that I should have to diet for ten weeks to get down to 135 lb. Instead I managed it in less than six weeks. I was so thrilled, that I set a new goal—down to 130 lb.

"I knew I wasn't supposed to go too low, or to reduce too quickly. But I argued that the class might have made a mistake about my build. For my height, if I was slim, my ideal weight might be only 124 lb.

"I felt so well that I kept on with my diet even after I got down to 130 lb. But when I was 128 lb., and was taking size 12 in clothes instead of 16, I called a halt. Then I could see myself as I really was—a basically slender girl who had been loaded up with eighteen extra pounds for nearly four years.

"It took me about ten weeks to lose the 20 lb., and I have never put them on again, although I eat well every day. Of course, I watch my weight. I check it on the scales once a week, especially if we have

been entertaining a good deal, or have gone out to dinner more often than usual.

"When I gain a pound or two, I immediately cut out all sweets and chocolate, and any snacks and 'elevenses'—and in a few days, never longer, I am back again to 128 lb.

"That is my best weight. I can tell by the way I look and the way I feel. And by the compliments I get on my appearance from my family and my husband. And by the fact that I have so much more energy and don't get tired.

"I know now that Nature did not mean me or anyone else to be fat. I never intend to be fat again, for as long as I live."

## *21. A Reducing Diet for Men*

DURING the space of ten days, recently, I talked to more than a dozen men who were dieting. I didn't go looking for these men, but met them in the normal course of business and social activity. Most of them were in their thirties and forties. They were dieting for different reasons: their doctor had suggested it; their wives had told them they were getting fat; their clothes didn't fit them, and they didn't relish the idea of buying a whole new wardrobe; or their natural vanity had made them ashamed of growing obviously middle-aged.

Some had been given diets, others used the smattering of ignorance they had picked up from their wives, friends, newspapers, and magazines. In almost every case, their diets were both unbalanced and inadequate. In almost every case, they felt underfed and hungry, their tempers were bad, and they were sure that dieting was a painful process and that they couldn't possibly continue with it.

The simple fact is that no man should attempt to diet on the same basis as any woman. Whereas a 1,200-to-1,300-calorie diet is a safe minimum for most women, no man should ever attempt eating less than 1,600 calories a day unless he is under the constant care of a doctor. The 10-to-12-calories-per-pound maintenance level applies to men as well as to women. The average man should weigh about 160 lb., ideally; therefore he needs at least 1,600 calories per day just to keep his bones, tissues, and glands functioning properly.

The odds are, if he is at all active in business, that he consumes about 2,200 to 2,400 per day in all; hence, even on a 1,600-calorie-per-day diet, he will be burning an extra 600 to 800 calories of his body fat.



Except for the amount of food eaten, a man who wants to lose weight must follow the same routine as a dieting woman. First, he must weigh himself on a reliable pair of scales—the same scales he will use from then on, once a week. If he weighs himself with clothing, he should subtract 8 lb. for indoor winter clothing, and 5 lb. for summer clothing.

Then, finding his height and frame on the chart, he selects his desired weight.

Subtracting his desired weight from his present weight, dividing the difference by his desired weight, and multiplying the quotient by 100 will give him his percentage of overweight.

Thus, a 5 ft. 7 in. man of stocky build would find himself somewhat corpulent at 180 lb. Checking the chart, he decides he should only weigh 165 lb.

Subtracting 165 from 180 gives his overweight—15 lb.

Dividing 15 by 165 shows that he is about 9 per cent overweight.

Taking 10 calories per pound as his basic minimum for dieting, and multiplying by his desired weight, this man must eat 1,650 calories per day to stay healthy.

Our reducing male need not confine himself to the 10-calorie-per-pound level. He may choose 11 or 12 calories if he takes regular daily physical activity other than walking about his office, or to and from a train or bus.

Also, if he is unusually susceptible to colds or to illness, he may choose the higher calorie count.

The man who chooses the extra calories must not expect to lose weight as rapidly as the one who takes the lower number. He will lose, but more slowly, and over a longer period of time.

Even at the lowest calorie level a man should eat more of the foundation foods than a woman. For example, whereas a woman is restricted to two moderate portions of meat, fish, or poultry each day, a man can have two-plus moderate portions.

And here are some other contrasts:

	<i>Women</i>	<i>Men</i>
Butter	3 teaspoons	5 teaspoons
Vegetables and fruit	4 servings	6 servings
Bread and cereals	3 slices or servings	4 slices or servings

And, in addition, a man may indulge in a simple pudding two or three times a week while dieting.

Even at its minimum level, this diet for a man is far from a starvation regimen.

Many men ask the Big Question: "Can I drink when I am on a diet?" The answer includes both mathematics (calories) and psychology (will-power). It is not necessary to say either "yes" or "no".

First, the mathematics. Here are some calorie counts of the most common alcoholic drinks.

<i>Types</i>	<i>Amounts</i>	<i>Calories</i>
Beer	10 oz.	180
Gin	1½ oz.	120
Rum	1½ oz.	150
Whisky	1½ oz.	150
Champagne	4 oz.	120
Port	1 oz.	53
Sherry	1 oz.	38
Table Wine (red or white)	4 oz.	89-95

Our typical man on his 1,600-calorie diet does not have a calorie allowance for drink unless he cuts down on some essential food. And supposing he does this—which is certainly not recommended—or has some additional calorie allowance to draw on. What then?

If he has only one cocktail, the man may pick a Martini. He will almost certainly go to the bar which serves the largest Martini—thereby, perhaps, almost doubling his calorie intake on this drink. Then, as drinking usually encourages eating, he may consume, as well as his 200- or 300-calorie Martini, a handful of potato crisps (100 calories) or some salted nuts (50 to 100 calories). All this with one cocktail.

As is well known, drinking lowers one's sense of responsibility and relaxes one's inhibitions. It is hard to stop after one cocktail unless one orders food at the same time.

Here, too, the cocktail has frequent disastrous effects on the diet. Cocktails stimulate the appetite by irritating the lining of the stomach. Drinking before a meal seems to encourage more food, heavier food, richer food—and perhaps a forbidden sweet course too.

Of course, you can drink and diet—if you stick to wines and beer—and if you drink these sparingly. But, except for a very occasional



drink of spirits, the dieter is advised to forget these until his waistline has regained its proper proportions.

There is another consideration too in choosing beer and wine instead of spirits. Both beer and wine contain a fair percentage of vitamins and minerals, as well as carbohydrate and sugar. The fact that their useful nutrients are accompanied by a percentage of alcohol does not mean, as one doctor says, "that they are shunned by the body".

This does not mean to imply that beer and wine are a good staple diet, but that they are a sound accompaniment to a meal and provide healthy nutrients as well as calories. Spirits, on the other hand, have little to recommend them from the nutritional point of view, and certainly play havoc with a low-calorie diet.

**TABLE FOR HEIGHT AND WEIGHT—MEN\***  
(Without Clothing)

Height (without shoes)		15-19 yrs.			20-24 yrs.			25-29 yrs.			30 yrs. and over		
		Slender Build	Medium Build	Large Build	Slender Build	Medium Build	Large Build	Slender Build	Medium Build	Large Build	Slender Build	Medium Build	Large Build
4	11	92	102	114	101	112	126	105	117	131	109	121	136
5	0	94	104	117	103	114	128	107	119	134	111	123	138
5	1	96	107	120	105	117	131	109	121	136	113	125	140
5	2	99	110	124	108	120	135	112	124	139	115	128	144
5	3	102	113	127	111	123	138	115	128	144	118	131	147
5	4	105	117	131	114	127	143	119	132	148	122	135	152
5	5	109	121	136	118	131	147	123	136	153	125	139	156
5	6	113	125	140	122	135	152	126	140	157	129	143	161
5	7	116	129	145	125	139	156	130	144	162	132	147	165
5	8	120	133	149	129	143	161	133	148	166	136	151	170
5	9	123	137	154	132	147	165	137	152	171	141	156	175
5	10	128	142	159	136	151	170	141	157	176	145	161	181
5	11	132	147	165	141	156	175	146	162	182	150	167	188
6	0	137	152	171	145	161	181	151	168	189	156	173	194
6	1	141	157	176	150	166	186	157	174	195	161	179	201
6	2	146	162	182	154	171	192	161	179	201	167	185	208

\* Table from Life Extension Institute of New York City



## 22. *How to Gain Weight on Your Own Diet*

Almost unnoticed in the large shadow cast by the vast number of overweights are those people who are underweight. Most of them are females—many are adolescents. It is not, generally speaking, medically unsound to be a little underweight, especially after the age of twenty-five. Before that age, it is not good to be underweight. At no age, however, is it healthy to be more than 10 per cent underweight—and 20 per cent is the danger figure. If you are 20 per cent or more underweight, see your doctor immediately.

How do you find your percentage of underweight? Exactly the same way as you find your percentage of overweight (see Chapter 14). It should be remembered that tables used as the basis for your calculations are compiled of averages only. A few pounds one way or another are not serious. However, any large percentage of underweight is either serious or dangerous.

As weight is one index to your general health, any persistent loss of weight in an adult, or a failure to gain in a growing child, may be an indication that all is not well. In cases of gradual and steady weight loss, it is best to see a doctor. Acting upon this symptom early may well prevent such diseases as anaemia and tuberculosis.

Although self-diagnosis is much more dangerous in cases of underweight than in overweight, there are many cases of minor underweight that are not primarily medical problems.

"Why can't I gain a pound, no matter what I eat?" is the standard question of the too-thin person—the exact counterpart of "I hardly eat a thing" in the fat person. Many individuals are thin and underweight because they are over-active and have inadequate rest and sleep. Eating in a hurry, or in places that are unappetising—where digestion is definitely retarded or interfered with—are conditions also unsuited to the person who wishes to gain weight.

Psychological factors, such as worry, mental strain, persistent states of emotional tension, a variety of phobias or aversions, particularly those which involve food—these are some of the reasons why many people fail to gain weight. Sometimes these factors, largely of nervous origin, create a vicious circle leading from poor nutrition to habits of hasty eating, irregular meals, the wrong kind of food, and finally an excessive use of stimulants, including coffee, and cigarettes. "Hidden hunger" often results from these causes. Hidden hunger is the lack of food which contains the essential

substances needed by the body in the necessary amounts (see Chapter 16).

Many people, both underweight and overweight, suffer from hidden hunger without knowing it. The symptoms are lack of energy, poor teeth, sore gums, lips that crack and bleed easily, brittle hair and nails, unattractive complexions, headaches, poor vision, and unstable nerves. Persons in this weight-loss class sometimes complain of a wide variety of vague symptoms which may indicate a real vitamin starvation, though a mild one. This can usually be traced back to the food they eat.

For most people, one of the main causes of underweight is the reverse of the process that causes overweight—too little food to replace what the body burns, with the extra fuel being drawn from the body tissues themselves, sometimes leaving literally only “skin and bone”. To overcome underweight one must add more fuel by increasing the customary food ration, being careful to select not only the amount but the kind.

Before we discuss the actual food needs of underweight people, it is necessary to point out that most underweights need a great deal of rest at night, and even during the day, if possible; otherwise fatigue may interfere with the appetite, and with the body's ability to use food to build up body weight. People who are too thin often have to learn the art of relaxation. A few minutes of complete relaxation before a meal is a great help in gaining weight and helping the body to digest food. Short rest periods after meals are also helpful. It is almost impossible for anyone who works to practice this advice at lunch; but anyone can do so at breakfast (by getting up thirty minutes earlier) and at dinner (by dining thirty minutes later, perhaps after a cocktail). Most important: avoid anything that makes you tense or over-anxious, as much as is possible to do so.

Remember, underweight is not inherited any more than overweight is. Both can be regulated by proper dieting.

Generally speaking, it is easier to put on weight than it is to take it off. Both require some knowledge and effort, however, especially in getting started.

Any plan to gain weight depends upon the same principles on which we have based our reducing methods. To gain, you must eat additional food or extra calories. Applying this calorie guide to underweight cases, an increase in food intake of about 500 calories per day should produce a gain of about 1 lb. per week. Using the 10-, 11-, or 12-calorie-per-pound maintenance diet, based on desired



weight (see Chapter 14), the underweight person should always choose the 12-calorie level as the minimum.

Then, on top of the Foundation Diet and the 500 calories (using the same foods as recommended in our Foundation Diet in Chapter 16), the underweight person should add 25 per cent or 50 per cent or 75 per cent of the number of calories, depending on whether activity is very light, fairly light, or moderate. No underweight person should engage in energetic activity if he can possibly avoid it.

For example, an underweight woman whose desired weight is 120 lb. should eat  $120 \times 12$ , or 1,440 calories, for her foundation diet. To this, for very light activity, she should add 360 calories (25 per cent) and 500 calories for weight gain. Thus, to gain weight, she should eat a minimum of 2,300 calories per day.

Also, she should avoid overeating. Too much rich food eaten by someone unaccustomed to a heavy diet can blunt the appetite and cause indigestion. The way to increase food intake is by doing it gradually—perhaps only an extra 100 calories per day in the first week, 200 the second week, and so on.

At the same time, she should—

Sleep an extra hour each night.

Take extra rest periods during the day

(a) before and after meals,

(b) before and after play.

Make good use of the rest periods provided during working hours, by sitting quietly or, if possible, lying down.

Use her head to save her feet (and strength). Think ahead so there is no need to retrace steps, run up and down stairs after forgotten articles, etc.

Learn the habit of relaxation—hot baths help; so do relaxing exercises.

Cut down on the length of time devoted to active sports.

Substitute a less-active for a too-active sport.

Make herself spend some time each day in *inactivity*.

In dieting to gain weight, increase the whole milk and butter in your diet, and follow these suggestions for adding extra calories without eating a great deal of extra bulk:

Add an egg to milk drinks.

Use extra butter on vegetables and bread.

Cook cereals in milk instead of water; put extra milk or cream on cereals.

Use extra milk or cream in coffee or tea.

Take creamed soups instead of clear soups.

Substitute mayonnaise for French dressing.

Drink whole milk instead of skimmed milk.

Eat more of the foods that are full of calories, such as: sweets, pies, jellies, sugar, cakes, peanut butter, gravy, buns, sauces, nuts, jam, and soft drinks.

Weight-gainers should avoid overeating any one food. One of the important problems among underweight people is overcoming prejudices against certain foods because at one time they have eaten too much of them.

Gaining weight can and should be a pleasant experience. Dieting to suit yourself helps to make it so. Another help is eating more snacks in between meals. Eating five or six times a day, lightly, is better than eating three heavy meals. However, make sure that the snacks do not interfere with eating at meal times.

Breakfast is just as important to the weight-gainer as to the reducer. It should be ample and unhurried. Plenty of starch should be eaten—extra bread, potatoes, and high-starch vegetables.

Here are some suggestions for taking extra calories with each meal:

#### *Breakfast*

Use cream or plenty of milk on fruit and cereals.

Add bacon or sausage to eggs.

Use extra bread and butter.

Use cream in coffee or tea; use cocoa made with milk.

#### *Lunch*

Choose creamed soups.

Use plenty of butter with bread or biscuits.

Use extra butter in sandwiches.

Use mayonnaise or cream dressings with salads.

Choose richer main dishes.

Select puddings made with milk and eggs.

Add cream or milk to desserts.

#### *Dinner*

Take creamed soups.

Take generous amounts of bread and butter.

Use extra butter on vegetables, or have them creamed.

Follow luncheon dessert suggestions.



*Between Meals*

Drink milk often as a beverage or in food; use at meals or between meals.

Take food before retiring and as many extras as possible, particularly those which are nutritious and not just appetite satisfiers.

*Other Suggestions*

Avoid too much sugar, as sugar blunts the appetite for other food.

Get plenty of rest, and learn to relax.

Most thin, wiry people are overactive and tense. To gain weight they must not only eat more, but take things easier and relax more.

However, some underweights are inactive physically, lack endurance, and do not care to take part in sport or exercise. As a result, they have poor muscle development. Furthermore, these people usually avoid fatty foods and sweets, and eat little when they are hungry because a small meal produces a feeling of fullness. For these people, some exercise to stimulate the appetite and help muscle development is an aid in increasing food consumption.

Moderate exercise is also helpful to most underweights who are below par in health, have poor muscle tone, bad posture and taut nerves. Moderate exercise helps to stimulate the blood supply to the digestive organs, and helps to put an edge on the appetite. The whole body is conditioned and benefited, especially the nervous system, which is frequently so tense that proper rest and relaxation may be difficult.

Exercise is best taken in the form of interesting games or recreation. People who enjoy sports are more likely to eat more and sleep better, so regular, moderate physical exercise actually helps increase food consumption and helps the underweight to gain.

### *23. What to Eat when your Diet Ends*

FOLLOWING the instructions for making your own diet and dieting to suit yourself, you have lost weight, or gained, depending on your intentions. Or you may be one of those fortunate people whose weight is about right. In any case, you are now at your desired weight.

How do you make sure of staying that way?

If you were on a reducing diet, you do not suddenly discard everything you have learned. You continue with the Foundation

Diet (see Chapter 16) as the basis. Then, the first week, you add about 25 per cent to your calories. If, at the end of the week, you are still losing weight, you may try adding another 25 per cent (total of 50 per cent) to your calories. If this does not start an upward climb in your poundage, you may continue to add calories until you feel you have reached the proper level.

Similarly, if you have been gaining weight, and now want to stop, the first thing to do is to cut out the extra 500 calories per day you have been eating—without, of course, interfering with your Foundation Diet. If you continue to gain weight, cut down slowly on calories, concentrating on eliminating the sugars, starches, and fats.

If your weight stays fairly steadily at the desired level, you are lucky. You should not, however, assume that you are eating properly. Hidden hunger can strike anyone. Correct weight is only one measure of health.

Appetite is not a reliable guide as to what and how much you should eat. Some knowledge about food and nutrients (see Chapters 15-18) is necessary to keep in good health, to provide sufficient energy for all activities, to lessen tension and fatigue, to protect against illness, and to ensure an attractive appearance. Good clear skin, bright sparkling eyes, smooth shiny hair, pleasant breath, normal body odours, strong teeth, nails, and bones, good muscle tone, and firm body contours are the result of all-round good health, based on proper eating *every day*.

Everyone should eat the Foundation Diet to start with, not skipping any of the food groups as outlined in Chapter 16, but, of course, with complete freedom of selection within those groups. At least one egg and one pint of milk, in some form or another, must be eaten by every adult every day.

While, as we have pointed out, it is not *necessary* to eat whole wheat, it is *desirable* to eat some whole grain. In refined flour and similar refined products, the outer layers of the grain have been removed, including most of the vitamins, mineral salts, and cellulose, the latter being very desirable as an aid to regular elimination. The refined products are often enriched (a word applied to flour, bread, rolls, cereal, or spaghetti) with vitamins B<sub>1</sub>, and B<sub>2</sub>, niacin, and iron. Still, not everything is put back, and it is a good idea, therefore, to eat *one* portion each day of a whole-grain bread or other whole-grain product.

Vitamins are chemical substances formed for the most part in green plants, and then transferred by way of plant or animal food



to the human body, where they act in the tissues in the same way as an ignition system acts in a motor-car: they furnish the spark for processes of life, health, and growth.

Your body cannot manufacture vitamins without help; even vitamin D, which is made inside your body, requires the external application of ultraviolet light from the sun or, in some cases, a good sun-lamp. All vitamins are different and unrelated, except that they work efficiently only when all are present, and many require minerals as well to do you the most good.

It is not necessary to analyse each vitamin or mineral, but only to know that all are present in sufficient quantities in our Foundation Diet. Thus, if you eat this diet every day, there is no chance of building up to either a vitamin or a mineral deficiency. If you do not eat it every day, do not think you are cheating anyone but yourself. The chances are, if you skip certain vitamins and minerals it may be years before you notice the harm you have done to your body. But sooner or later you will feel the effects. Deficiencies caused by poor diet are rarely single, and usually come in groups, as follows:

<i>Possible Signs of Inadequate Intake</i>	and	<i>Possible Effect on Appearance</i>
Vitamin A	Rough dry skin	Unattractive complexion
Vitamin B <sub>1</sub>	Constipation Nervousness	May cause pimples and sallowiness
Vitamin B <sub>2</sub>	Inability to concentrate Sores in angles of mouth Premature ageing Burning eyelids	May cause a chapped look on lips May cause "early" wrinkles
Niacin	Intolerance to Light Skin eruptions	May cause squinting Unattractive complexion
Vitamin C	Tendency to bruise easily Pallor Gum infection Pyorrhoea	Black and blue marks Lack of colour Dental disfigurations Poor complexion

This unpleasant little list is printed, not to scare you into buying vitamin pills, but as an incentive to improving your diet. Dr C. A. Elvehjem, who has devoted much of his life to unfolding the mysteries of vitamins, says: "Vitamins should be obtained from natural foods, if possible. Generally, they are cheaper, more palatable, and in better balance with other factors when taken in this

form . . . there is no virtue in using a concentrate (vitamin capsule) merely because the vitamin is present in concentrated form." The same holds true of minerals, as for example calcium tablets (see Chapter 9), since these are useless unless vitamin D and phosphorus are supplied at the same time.

The heavy accent on protein lately has led some anxious dieters to take concentrated protein or protein hydrolysates. These special concentrates are extremely valuable in treating certain illnesses, for which they will be prescribed by a physician, or for certain dietary conditions. They are definitely not for use by the public, and should not be self-prescribed with, or without, a well-balanced diet.

Besides the regular arguments for using good food as a source of nutrients, there are two other sound reasons. One is this: the fact that new vitamins are constantly being discovered means that we do not know all of these substances yet. Dosing oneself with vitamin capsules, therefore, means limiting oneself to the vitamins which have been discovered and concentrated. What about the others? We do not know *what* they are, but we do know *where* they must be—in a balanced diet just like the other vitamins.

Besides being expensive, vitamin concentrates may deteriorate. Light and heat seem to destroy their potency, if kept on the chemist's shelves or in medicine cupboards for any length of time. Then, if you are getting your full quota of vitamins in food, any excess of vitamins you consume is excreted by your body through your kidneys. You are paying good money for this waste. And there is a very real chance that massive doses of certain vitamins, particularly vitamin D, may result in definite harm.

If these arguments are not enough to keep you from dosing yourself with vitamin concentrates, consider this. Suppose you feel tired, cross, and run down. You read an advertisement in the newspaper that such symptoms betray a deficiency of vitamin B<sub>1</sub>. You go out and buy a quantity of this chemical and dose yourself. But you don't feel any better. Why? Because the symptoms of the vitamin deficiency are the same as those of an iron deficiency—your self-diagnosis may be completely wrong. In such cases only a doctor can guide you properly.

By now, perhaps, we have made our point about the well-balanced diet.

As to your calorie intake, this depends on many factors, but mostly on two: (1) your desired weight, and (2) your activity level.

Science has made a series of tests to show us how many calories



we burn up doing various kinds of tasks. By making a great many tests on a great number of people, scientists now know precisely how many calories per pound of body weight you burn up when you sit, swim, type, iron, drive a car, talk, walk, sleep, etc.

By keeping a complete record of your activities in the course of twenty-four hours, you can tell exactly how many calories you burn up in the course of a normal day.

First, you must keep an exact account of your daily activities (do this by filling in the activity chart on page 51).

Secondly, you must keep a check on the *time* spent in each activity.

Then, by consulting page 140, you can determine how many calories you are burning each day *per pound of body weight*.

Next, multiply this number by your *ideal weight* as selected from the weight charts on pages 47 and 93. You will then find out the exact number of calories you should eat to stay at that ideal weight.

The average woman, when not dieting, needs from 1,800 to 2,000 calories each day to look and feel her best. She may need more if she works hard physically, but she needs at least this number of calories if she is engaged in normal light housework or office work. The average man, similarly, needs from 2,200 to 2,500 calories.

Breakfast should be from 450 to 650 calories, always including a fruit (preferably a citrus fruit) or fruit juice, cereal, and/or bread, egg, and beverage. Here are some suggestions.

FRUIT may be of any kind, although if you begin the day with a citrus fruit, you can forget that "must" food for the rest of the day, if you wish, and tick off vitamin C.

Orange	Banana	Prunes
Grapefruit	Apple	Figs
Tangerines	Peaches	Rhubarb
Strawberries and	Pears	Apricots
berries of other	Pineapple	Cherries
kinds		
Dried fruit mixture		
Grapefruit and orange sections		
Prunes or figs with lemon slices		
Mixed berries		
Combinations of fruit juices		

CEREALS, hot or cold, with milk are a good way in which to obtain a whole-grain product: also part of the milk requirement for the day.

If you are watching calories, go sparingly with sugar; vice versa if you wish to add some pounds.

*Cereals to be Cooked*

Oatmeal  
Farina  
Cream of wheat  
Wheat cereal

*Ready-to-Eat Cereals*

Bran cereals  
Bran flakes  
Corn cereals  
Corn flakes  
Puffed cereals  
Rice cereals.  
Shredded Wheat  
Wheat and barley kernels  
Wheat flakes

Combine with fruit.

Use honey, jelly, syrup, or sugar for sweetening.

Combine two cereals for variety.

Mould and chill hot cereals, slice thinly, fry crisply, and serve with syrup.

BREADS can be served in a variety of ways, toasted or plain, and include:

Breads (plain or toasted)—white, whole-wheat, rye  
Biscuits  
Cinnamon toast  
French toast  
Fruit breads, such as raisin or date  
Rolls—plain, sweet, white, wheat  
Waffles

EGGS. An egg seems to go with breakfast. Even those who like a light breakfast can have an egg with toast, omitting a cereal if they wish.

Try them:

Plain boiled  
Poached  
Fried

Scrambled  
Omelette  
With ham or bacon pieces

With herbs

BEVERAGE. The kind of beverage you drink at breakfast time is an individual matter. Coffee is the favourite with most people—tea is preferred by others. Coffee and tea are not substitutes for milk, and have no food value unless milk, or cream, and sugar are added.

Milk is sometimes preferred as a beverage in the morning rather



than at any other time and may be taken either hot or cold. In cold weather most of us prefer a hot drink, and if so, hot chocolate or cocoa is excellent for breakfast. It is better to use milk in making this drink for this enables us to meet more easily our standard requirement of one pint of milk each day. Remember, however, that when chocolate is made too sweet it blunts the appetite in the same way that cereals do when large amounts of sugar are added.

*Water.* It is also a good idea to drink part of the daily requirement of water either preceding or during the meal. The practice of taking one or two glasses of water immediately on rising is an excellent health practice and has been found to be helpful to some people in overcoming poor elimination.

In our chapter on breakfasts, we have seen that research proves that we need no more than 25 per cent of our day's calorie total at breakfast. Lunch may consist of another 25 per cent to 33 per cent of the day's calories. Here are several different types of luncheons with calorie counts for each:

<i>Soup Luncheon</i>	Cream of tomato soup Whole-wheat bread and butter (2 slices) Fruit cup Total—500 to 600 calories
<i>Salad Luncheon</i>	Mixed green salad Roll and butter Chocolate cake Milk (1 glass) Total—500 to 600 calories
<i>Sandwich Luncheon</i>	Clear soup Ham sandwich with brown bread Vanilla ice-cream (real cream) Total—600 to 700 calories
<i>Hot Dish Luncheon</i>	Scrambled eggs on toast Fresh peas Apple pie with custard Black coffee with sugar Total—700 to 800 calories

Again looking at luncheon foods with an eye on the total day's food, we might consider the following:

FRUIT for lunch can be had as a juice, a salad or a dessert such as apple, fruit cup, or stewed fruit.

EGGS, CHEESE, AND VEGETABLES offer great variety for lunch. If you like sandwiches, you can "sandwich in" your egg a day here, or take a cheese sandwich as part of your day's milk quota. A tomato and lettuce sandwich would help on vegetables, or a mixed salad with another dish could be part of your vegetable quota. A vegetable dish could be a "three-in-one" vegetable proposition. A salad with its green leafy foundation adds to your vegetable score, and can give also some milk (as with cream or cottage cheese) or an egg or some citrus (as tomato, grapefruit, and orange) or other fruit, or a good serving of vegetables, or even of meat or fish if preferred.

MILK. A cream soup or creamed food helps with the milk score. Ice-cream or a milk shake is a tasty way in which to obtain milk. It is not necessary to *drink* two glasses of milk, although a glass some time during the day helps to assure your two glasses.

BREAD. If you choose a sandwich, you might have one of brown bread or wholemeal, especially if you had no wholemeal at breakfast, and do not expect to eat any during the day. With a salad, you might have a brown or wholemeal roll. In hot weather a large bowl of dry cereal and cold milk is an excellent "double-duty" luncheon dish.

BUTTER is often taken at each meal of the day on bread, vegetables, in cooking, etc., and as a rule there is no difficulty for most of us in acquiring our daily butter quota.

BEVERAGE. Whether it will be tea, coffee, or milk will depend on what you like and whether you get your milk quota if you do not take it as a beverage at this meal. A glass of water will help fill the quota of four to six glasses a day.

### *Many Variations Possible*

It is hardly necessary to say that many, many variations of foods suggested here are possible with the same general returns guaranteed in good nutrition. The salad dish may vary from plain mixed green salad to salads of fruit stuffed with cheeses (plain, or garnished with nuts, ginger, raisins, etc.) or a combination salad dish which has a little of everything arranged for eye as well as taste appeal. Sandwiches likewise lend themselves to all kinds of fillings and bread combinations—toasted or plain, single- and double-decker, with or without salad. Their contribution, nutritionally speaking, is about the same. In terms of calories, the double-decker and those made with mayonnaise or rich cream-cheese fillings step up the score more or less, and vary slightly also according to the liberality of the butter spread on them.



Now comes dinner, the large meal of the day, completing the calories and nutrients for good health.

The following menus are listed merely as examples of the kind of main meal which is substantial and one which suggests a sample of foods around which we ordinarily build a dinner—namely meat, poultry, fish, or meat alternate, vegetables, dessert, and beverage:

Pork chop (lean)  
Boiled or mashed potatoes (with butter)  
String beans  
Mixed salad  
Apple sauce  
Black coffee

Total calories, 800–900

Scrambled eggs on toast  
Fresh peas  
Sweet pickles  
Apple pie  
Cheese and biscuits  
Black coffee, or tea with lemon and sugar

Total calories, 800–900

Grilled mackerel or herring.  
Baked potato with butter  
Tomato and cucumber salad (with French dressing)  
Lemon sponge  
Milk

Total calories, 700–800

These menus represent a wide choice from the standpoint of good nutrition, and are fairly typical of dinners or even of hearty luncheons or suppers. The meals suggested above provide from 700 to 900 calories as well as a generous supply of essential nutrients. A puffy omelette; many creamed or scalloped foods, such as fish, meats, vegetables, macaroni and cheese; all kinds of meat, including the variety meats such as liver, kidneys, etc.; potato and vegetable, with possibly a lighter dessert, might be suggested instead, without changing very much the nutritive values of the meal. An egg dish has been selected, since it is an excellent meat alternative, is frequently less expensive than meat, may be prepared in a variety of ways, and is liked by most people. Moreover, eggs make valuable

contributions to the food needs of young and old alike. They give us excellent protein, which is essentially a body-building food.

In many aspects eggs stand midway between meat and milk in nutritional excellency. They are one of the complete protein foods, and the only food whose iron is fully utilized by the body. They are also one of the few natural foods which contain some of the sunshine vitamin D. Brown and white shelled eggs are equally good. It does not greatly matter at which meal we serve eggs, so long as we have at least one each day. Hard-boiled eggs are as digestible and as nourishing as soft-boiled—even babies may have the yolk of a hard-boiled egg.

For many people the main dish must contain meat, or they feel that their main meal is inadequate. Nutritionally speaking, meat is a source of many essential food substances. The quality of its protein is high. All the necessary individual building blocks of a protein are present in the lean part of meat. It is rich in phosphorus and its iron is in a readily available form for human consumption. It supplies many of the desired vitamins, which are found especially in the variety meats such as liver, kidney, and heart. In fact, these are rich sources of iron, vitamin A, thiamine (B<sub>1</sub>), and riboflavin (B<sub>2</sub>). Lean pork is one of the richest of all in thiamine. When meat is scarce, the "meat-eaters" amongst us have to acquire a taste for meat alternatives—cheese and egg dishes, for example—or for dishes in which meat flavour has been extended by the use of a small portion of, say, minced meat combined with rice, macaroni, and the like. Poultry and fish provide excellent and tasty variety in the usual "meat dish".

A main dish accompanied by a vegetable or small salad, a dessert, and beverage is hearty enough to fulfil the customary demands of the main meal for most people. Protein essentials can be partly, if not entirely, supplied at the main meal, and the missing links of the other two meals filled in by various combinations of choices in the form of cocktails, soups, desserts, salads, and beverages.

Looking back over the total day's food, we find that fruit is not necessary at dinner if our fruit quota is already filled, or if we take fruit before going to bed or before the day is over. As at luncheon or supper, the fruit could be juice, a fruit pie, or fruit cup, or fresh or tinned fruit. At this point it would be wise if our total fruit and vegetable score added up to the five servings recommended daily.

Milk at dinner can be taken as a beverage, in a creamed main dish, a soup, a custard or pudding, or as cheese, and should fill our day's



requirement of two glasses or equivalent, unless we plan to complete our milk requirement before retiring.

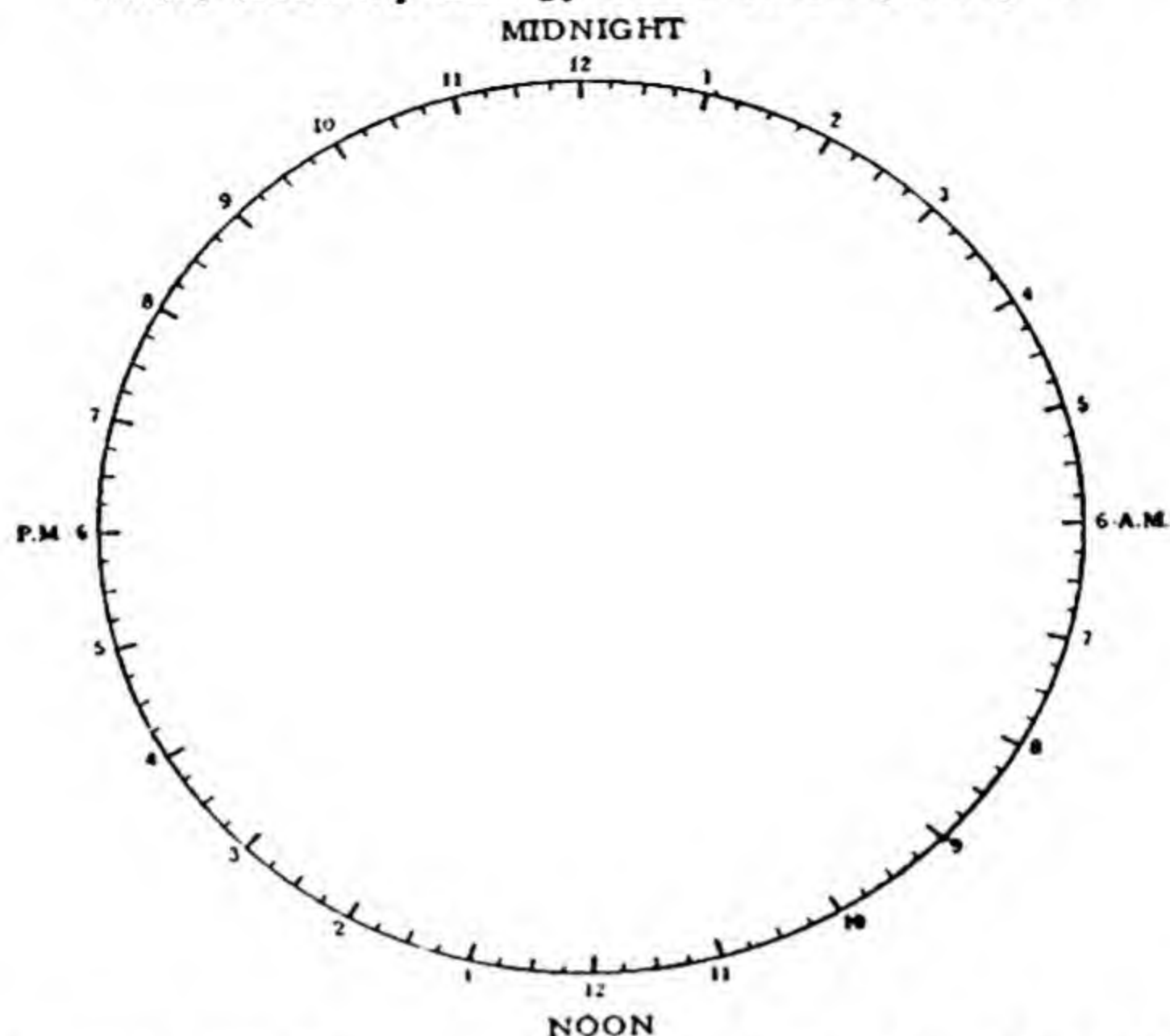
If a wholemeal product has not been eaten before the final meal of the day, it would be wise to include it here. Meat loaves containing wholemeal bread, or cereals, or casserole dishes "topped" with dry cereal "crusts" are also ways in which to get in a whole grain at dinner.

Naturally many, many variations of the dishes suggested here are possible with the same general benefits from the standpoint of the essential nutrients. For example, creamed and scalloped foods offer variation in practically everything from left-over meats, eggs, vegetables, fish, macaroni, and similar products together with cheese, and rate about equal with the nourishing factors they contain. The chief value of these dishes is in the milk, butter, and sometimes cheese used as a basis for their preparation. Enough mention has already been made of desserts to show how they may serve with great variation to fill in gaps and at the same time go well with any meal, for it is perfectly true that one can select a meal that would give abundantly many things we need and yet be very unappetizing. A creamed soup, scalloped oysters, and a custard are an example of such a pallid meal. Contrast in colour, flavour, and texture is just as important to good daily nutrition as are proteins, vitamins, and minerals, for they make our meals appetizing and interesting. Meals are to be eaten and enjoyed, otherwise our knowledge of what the different foods contain and can do for us remains merely a lesson in nutrition.

A varied diet *plus* other daily habits is necessary for maximum wellbeing. Such habits include sufficient sleep, relaxation and recreation, exercise, and good elimination. The well-balanced individual is the result of well-balanced eating, sleeping, working, and playing.

# WHEEL OF ACTIVITY

Where Does My Energy Go – And My Weight?



Show time devoted to:

Hrs. Min.

Sleep (Inactivity)

Work (Activity)

Meals (Activity)

Grooming (Activity)

Household Duties (Activity)

Outdoor Recreation –

Act. or Inact.

Indoor Recreation –

Act. or Inact.

Travel –

Act. or Inact.

Total 24

My total time at present for:

Hrs. Min.

Activity

Inactivity

During how much of this time do I feel –

Relaxed?

At tension?



## PART SIX

# YOUR FOOD AND YOUR HEALTH

### *24. You are Never too Old to Eat*

OLD AGE is not a disease, as most young people seem to think. It is merely another phase of existence, not basically different from youth or middle age. Any difference is one of degree rather than of kind.

This certainly applies to food and diet. Many older people usually put on a certain amount of weight. This is because they are eating the same kind and amount of food that they ate when they were younger and more active. Age slows down activity. It also slows down metabolism—the rate at which the body burns food. For both these reasons, less food should be eaten with each passing decade of existence. A man of seventy needs only 75 per cent as much food as he did when he was twenty-five years old.

But there is no reason why he should not eat the same kind of foods that he ate when he was younger. He may complain that he feels tired, that his appetite is not good, that he has dyspepsia or indigestion. The odds are that these and the gloom which often envelops older people, their chronic anxiety, even their loss of sleep (older folk do need less sleep, but need never suffer from insomnia) may be traced to a faulty diet.

Old folk suffer many disabilities caused by poor diet. Usually they lack protein, which results in a nitrogen deficiency, tissue wastage, anaemia and oedema (excess moisture in the tissues). Older people may actually require more meat than youngsters, to make up for the lack of nitrogen in their bodies. And they also require full portions of milk and cheese to build up their protein balance.

The fact is your body does not and cannot store up excess amino-acids—the basic building blocks of life—which come from protein. You have to eat protein every day to maintain your body's supply of these vital substances. There is no other way. Thus, vegetarianism or any other food fad which eliminates an entire group of necessary nutrients either completely or partially from the diet is a danger to health.

Your body was not designed to live only on vegetables, although you can live on them for some time. It is also possible to live exclusively on meat and fat, but this is not recommended either. The best solution that science has found to the problem of eating for good health at any age is a well-rounded diet based on a variety of foods.

No matter how old you are, you need food that contains protein and minerals, the building materials with which your body replaces and repairs the worn tissues you are steadily sloughing off throughout life. You also need vitamins—the substances which help your body to utilize the protein and minerals properly, and which keep you feeling zestful. And everybody, even someone who stays in bed all day, burns calories for warmth.

It is obvious, then, that there are no differences in your body's food requirements when you get old except in amount. You can retire from work, but not from eating a well-balanced diet. Older folk are advised by experts not to handicap themselves with restricted diets on the assumption that some foods cause acid mouth, sour stomach, or nausea. If such symptoms persist, see a doctor. But normally the symptoms will disappear when a truly varied diet is eaten.

It is nonsense to suppose that a healthy stomach should suddenly begin to discriminate against certain foods merely because it is older than it used to be. True, the older stomach cannot take overloading as well as a younger one—so this is one thing to avoid. But it can probably go on digesting the same foods. Take cheese, for example. Some older people get the idea that cheese is hard to digest, which it isn't. The trouble, usually, is that they are adding cheese to an already full stomach, thus creating a condition of overloading.

When people get older, they often have trouble with their teeth. This may cause them to chew their food poorly, in which case they are forcing their stomachs to do extra work. The result is indigestion and discomfort, which is blamed on the food rather than on the fact that it is poorly chewed. Actually, many older people are suffering from the need for dental work while thinking that it is their stomachs which need repairing.

If you know an older person who is restricting his diet simply because he cannot chew many foods, here are some suggestions you can make for creating a balanced diet and one which is, at the same time, chewable:

1. Meat or poultry cut into small pieces may be creamed, or



combined with potatoes, peas, rice, or noodles. Fish is easy to chew prepared in the usual ways—baked, boiled, grilled, used in curries, flaked in creamed dishes.

2. Cheese is easy to eat if finely grated or melted (as in cheese sauce) and served over small squares of toast, cut-up asparagus, or broccoli, or in cheese soufflé or cheese omelette. Try cream cheese with salad dressing or with tinned fruit.

3. Eggs are easy to eat and easy to digest cooked in any style. Crisp bacon, chopped up finely, adds variety to eggs.

4. Drink a great deal of milk and use it in cooking. It may be used in many soups, creamed and scalloped dishes, puddings, custards, and beverages.

5. Cooked fruits and vegetables may be chopped, mashed, or even strained if necessary. If complete "purée-ing" is preferred, a special mixer can be a great help. Even meat can be puréed together with vegetables in one of the modern electrical mixers. There are also tinned vegetables and other foods chopped and minced for small children. But puréed foods usually need seasoning.

6. Tinned fruits are softer than fresh fruits, and there is on the market a wide variety of fruit and vegetable juices, both tinned and frozen, to choose from.

7. Corn on the cob (now becoming popular) is hard to chew, but tinned creamed corn can now be bought and is easy to eat. Seeds and skin from tomatoes can be sieved out.

8. Cooked cereals, or dry cereals soaked in milk, are an important part of any well-balanced diet, and they are both easy to chew. Then there are such things as milk toast, or sponge cake over which stewed fruit and juice, cream or custard has been poured.

9. Some easy-to-chew dessert suggestions are: custards, puddings, fruit, junket, ice-cream, or soft cakes. All of these may be varied by serving them with different juices or sauces.

Many older people tend to eat poorly because (*a*) they have to cook for themselves and eat alone, or (*b*) their palates and sense of smell are not so keen as they used to be, hence many foods seem tasteless.

These conditions may be remedied as follows:

1. For the lone cooker—buy small quantities, so that you do not have lots of unappetizing left-overs, and plan your menus in advance. Avoid last-minute rushes by using partially prepared foods, ready-mixes, etc., or by preparing food partially in advance.

2. For the lone eater—if setting a table for yourself seems hardly worth the trouble, don't drift into stand-up meals. Put your dinner on a tray and take it to a chair by the window, or next to a radio or television set. Or, weather permitting, take your tray out of doors. Use other trays to collect cutlery, food, and other things you normally put on a table—or use a trolley to ease the burden.

3. To coax your appetite, take a walk or other light exercise before your meal. As you grow older, tempt your senses of taste and smell by using more flavouring in your food; use foods of sharply contrasting flavours and textures, such as a crisp pickle or lettuce leaf together with soft mashed potatoes. Try such seasonings as onion, chives, parsley, mint, chopped celery, basil, garlic, or others. They help to make eating the pleasure it should always be.

Some old folk live in restricted quarters with limited cooking facilities. Still, they can eat well-balanced meals, even if these are cooked in a single utensil. Such one-dish meals as Irish stew, braised liver, or pot-roast with vegetables, fish or curry. Any one-dish meal can be helped out with a raw salad, bread, a beverage, and perhaps a simple dessert.

Or two dishes can be cooked simultaneously in a double boiler. Scrambled eggs or fish in the top can be kept warm while a green vegetable is cooked in the water below. Or while the boiling water in the lower saucepan cooks a potato or some other vegetable, the upper dish may be reheating cold meat or warming up bread rolls.

If gas cooking facilities are limited to a single burner, it is worth the benefit in added health and nutrition to put in a small electric cooking stove or a boiler. Then complete meals may be cooked easily and simultaneously.

## 25. *Should Teen-Agers Diet?*

"THE teens are the healthiest years of life," says one authority. This is the time of fewest accidents and serious illness, a time when death is rare. Yet, the authority continues, "a high proportion of teen-agers have poor teeth and defective vision, with need for medical measures for both conditions. *Many youngsters, particularly girls, show the effects of poor dietary habits*" (italics mine).

Similarly, in a study of dietary habits in typical homes which did not have to economize on food, it was found that adult women and



adolescent girls had the most serious nutritional deficiencies. The main reason for this was the poor diet of adult women who were using faulty diets—the kind discussed in Chapter 8—to reduce. Fully one-third of the women studied had not been eating enough of anything—vitamins, minerals, or calories. Their daughters, small wonder, were following suit.

This was the picture painted by the research workers. First of all, most of the girls did not eat enough, and certainly not enough of the right foods: 30·8 per cent were eating less than 75 per cent of the number of calories they needed; fully 50 per cent were underweight, at a time of life when underweight is unhealthy; 14·2 per cent were far below the standard of skeletal maturity for their ages.

There was a serious deficiency of calcium in their diets—30·7 per cent consuming less than three-quarters of the recommended amounts of this substance. Inasmuch as many teen-agers have not attained their full growth, and calcium is vitally needed by growing bodies, this lack of calcium could seriously affect their growth. Also, these girls are the mothers of the future, and it is vital for pregnant women to have a full supply of calcium to supply to their children and, at the same time, to protect their own health.

Scientists are sure that adolescent girls need plenty of iron, especially before the age of fourteen. If they do not get it, they may develop some form of anaemia. Yet, in this particular study, 18·7 per cent of the girls were not getting enough iron in their diet. They were not getting enough vitamin A—most of them showed the lowest possible amounts of this vitamin in their blood. And 87·5 per cent were not getting enough vitamin D, the substance which closely affects the deposit of minerals in the bones. This probably accounts for the fact that every one of the girls fell into the three lowest classifications of bone density—that is, none of them had really strong bones.

The survey showed that boys and men were not such bad eaters as girls and women. Boys were not so underweight, but they did not have good teeth, and because of their antipathy to what they called “rabbit food” most of them were low on vitamin C.

This survey, like others, shows what is wrong with teen-age eating habits. And it answers the question: should teen-agers diet?

The answer is that every teen-ager should diet by eating enough food. Very few teen-agers have to cut down on food, although many could well cut down on sweets. Most teen-agers need to eat more than they are eating.

Teen-agers burn energy in fast games and other activities. They

also burn it in growing. It is not uncommon for a teen-age son to need twice the number of calories which his adult father consumes in a day. And he needs more than calories—he needs the nutrients which help him to grow.

Teen-agers are generally classified into two groups—thirteen to fifteen years, and sixteen to twenty years—with food requirements differing slightly for each.

Both groups need a minimum of 7 quarts of milk per week. 10 quarts is not too much. Younger girls need  $3\frac{1}{2}$  lb. of meat, fish, and poultry per week, minimum, and younger boys need up to 4 lb. Both need an egg a day. Girls need 2 oz. and boys 4 oz. of the pulse foods each week. They both need more than 4 lb. of tomatoes and citrus fruit; girls need  $3\frac{1}{2}$  lb. of leafy vegetables, boys need 4 lb.; girls 3 lb. of potatoes and boys  $3\frac{1}{2}$  lb.; girls  $6\frac{1}{4}$  lb. of other fruits and vegetables, boys 8 lb.; flour and cereals—girls 3 lb., boys  $3\frac{1}{2}$  lb.; fats—girls 15 oz., boys 16 oz.; sugar, syrup, treacle, jam, sweets—girls 15 oz., boys 18 oz.

These are average requirements which vary up or down with the size of the children. For the sixteen to twenty age group add about 10 per cent to each type of food (except milk and eggs), although girls should cut down to 12 oz. of fats and sweets, respectively, while boys can go up to 1 lb. 9 oz. of each, because boys are so much more active than girls at these ages.

If obesity is a problem in a teen-ager, it can usually be traced back to overeating. And this, in turn, is often traceable back to the mental and emotional difficulties that teen-agers encounter in the transition from childhood to adulthood.

One particular group of teen-age girls found that they had the common problem of feeling "unpopular", hence lonely. Instead of mixing with other children after school, they would go home alone and, because they had nothing else to do, eat. They all indulged in between-meal snacks of rich, calorie-filled foods. Also, many had to help with the washing up after supper, and couldn't resist raiding the nearby larder.

This particular group of girls got together and decided that they would encourage each other to lose weight by competing to see who could cut down on the sweets, cakes, and other snacks, while eating a full quota of the basic foods. They formed a weight group under the supervision of the school dietitian and found that their interest in one another and their common purpose helped most of them to eliminate *extra* calories. They divided themselves into teams with such



encouraging names as the "Slender Benders" and the "Waist-aways". They matched calorie for calorie and pound for pound. Each week they were all weighed at the same time, and the group that did best was the champion for that week. All of them lost weight.

## *26. How to Eat while Pregnant*

*You are what you eat* : you were, at birth, what your mother ate, and your child will be what you eat. There is nothing mysterious about this. Your baby—and any baby—is formed from an ovum, fertilized by a sperm, which grows and multiplies within the mother's body. The only source for the materials of growth and multiplication is in the mother's body. Since mothers obtain these materials from the food they eat, it may be seen that maternal nutrition is an extremely important factor in creating healthy babies.

There has been great progress made in reducing the number of still-births and the number of infant deaths. Yet this ratio is much higher than it need be. It can be reduced still further by proper eating during pregnancy, and before.

If modern medical science has learned anything about pregnancy it is that while a pregnant woman must indeed eat for two, she must certainly not eat twice as much as she would for herself alone. As a matter of fact, doctors have learned that the pregnant woman needs very little more than the woman who is not carrying a child, in the way of food quantity.

Overeating is positively dangerous during pregnancy. It makes the mother-to-be more prone to accidents and complicates every stage of her pregnancy. It is a real threat to normal childbirth, and may result in post-natal complications. The foetus will almost certainly be over-large, which is bad for the mother and for the child.

Too-large babies may suffer birth injury and are more susceptible to disease later.

On the other hand, while a pregnant woman should watch her diet, she must eat substantial amounts of food. If she does not, her health and the health of her baby will suffer. Of 284 pregnant women who participated in one study of the relationship of diet to the health of mother and child, it was found that when the maternal diet was "excellent or good" 95 per cent of the infants were in good or excellent physical condition. Only 5 per cent were fair or poor. When

the maternal diet was "poor", 65 per cent of the infants were poor, 27 per cent fair, and only 8 per cent in good or excellent condition.

It was also determined that the average birth weights and lengths of infants decreased as the mother's dietary rating became poorer.

There is another important result of diet in pregnancy. When the mother eats a good diet, her chances of still-birth, premature birth, infant morbidity (sickness), and mortality are low. Chances are, she will have a normal birth and a healthy child.

Studies in Holland and in Leningrad, U.S.S.R., during the war, under conditions of severe hardship, showed indisputably that when there was not enough food, or when the food was not the right kind, expectant mothers and their babies were the chief sufferers. In Leningrad, which was under siege for many months, people lived on defective rye flour and on cellulose, malt, and bran. During this period, still-births rose to 56 per cent—twice the normal rate—and premature births soared to more than 40 per cent. Birth weights of infants were below normal, and weight loss during the first few days of life (some weight loss during this period is normal) was much greater than it should have been. In addition, infant illness and deaths increased by leaps and bounds.

When women were starved systematically, as many were in Holland during the war period of food shortage, fully 50 per cent of them became infertile, incapable of conceiving children at all.

So much for the grim side of diet and pregnancy. The following are facts and foods which every pregnant woman should know and eat:

First, it is important that a woman should be of normal weight for her size and age when she conceives. The more her weight departs from normal, either below or above the proper poundage, the greater risk she undergoes in carrying and bearing children.

Secondly, it is extremely important that a woman should not gain a great deal of weight during her pregnancy. The average weight gain considered healthy and not dangerous is between 20 and 24 lb.

Thirdly, it is extremely unhealthy for any underweight woman to attempt to gain large amounts of weight during her pregnancy; and it is equally unhealthy for any fat woman to try to reduce. There is good medical evidence that the number of *calories* a pregnant woman eats has a large influence on the value she obtains from the *protein* and *calcium* in her food—the two important body-building materials that go to create the new tissues formed by the foetus, as well as by the mother.



Protein is probably the most important nutrient for a pregnant woman. It plays an important part in vital body functions: carrying oxygen to tissues, blood clotting, enzyme and hormone production, muscle contraction. "It is small wonder," says the American journal, *Dairy Council Digest*, "... that evidence has been found indicating significant relationship between the level of protein intake during pregnancy and the incidence of anaemia and abortion in the mother and the weight, length, bone development, and general health of infants at birth."

The bones of the foetus are formed of calcium, phosphorus, magnesium, and vitamin D; and the single most vital element of these is calcium. 90 per cent of the body's calcium is found in the bones; and there are not many foods which furnish calcium. The foetus tends to take calcium from the mother's skeleton if her diet is not rich enough in this nutrient, leaving her with deformed bones and decayed teeth. Lack of calcium in the foetus shows later in the child, in the form of rickets, a deforming bone disease.

It is almost impossible for a pregnant woman, or one who is breast-feeding her baby (when calcium requirements are even higher than during pregnancy), to obtain enough calcium without drinking large quantities of milk. Milk contains not only calcium and vitamin A, but an important dietary fat (butterfat) and high-quality protein which helps the body to utilize the first two. Homogenized milk is fortified with vitamin D, also needed to utilize calcium.

Vitamin D does not have to be taken in milk; it can come in the form of fish-liver oils or concentrates. And the body makes its own vitamin D when the skin is exposed to the ultraviolet rays of the sun or a sun lamp. Overdosage of any vitamin is wasteful and may be harmful, as stated; but it is important to make sure of the daily minimum of vitamin D in one form or another.

No woman can conceive properly without an adequate supply of vitamin A. Lack of this vitamin can be responsible for abnormal and deformed babies and for still-births. These statements are not an attempt to scare any woman into buying vitamin A, which she can get in milk, butter, eggs, and cod-liver oil. However, if her doctor sees evidence of a poor diet or other symptoms indicating a possible shortage of vitamin A, he will prescribe it before pregnancy to ensure a healthy child.

Lack of vitamin E causes permanent sterility in men, but generally does not prevent a woman from conceiving, although it may lead to an early miscarriage. Plentiful in green leafy vegetables and in veget-

able oils, vitamin E is sometimes prescribed for women who habitually miscarry.

Vitamin K, found in abundance in green leafy vegetables, seems to play an important part in blood clotting. Only in rare cases in the last month of pregnancy is it sometimes administered artificially to avert haemorrhages in newborn infants.

Vitamin C is such an important part of all growth that the foetus, growing within the mother's womb, takes large quantities of it from the mother's blood. As a result, it is estimated that 50 per cent to 75 per cent of mothers have a vitamin C deficiency when they are giving birth. Some doctors believe that gingivitis and anaemia in the expectant mother can be traced to a shortage of vitamin C. Therefore it is generally recommended that the pregnant woman should eat large quantities of citrus fruit, tomatoes, and some other fruits and vegetables; or, if these are not available, that she should take at least 100 milligrammes of ascorbic acid daily during her pregnancy.

Many pregnant women suffer from morning sickness, loss of appetite, and constipation; or burning feet, muscular cramp, palpitations, neuritis, numbness, paralysis, and other unpleasant symptoms. Often such complaints can be traced to a lack of thiamine (vitamin B, B<sub>1</sub>), a nutrient found in lean pork, liver, eggs, whole grain, and enriched cereals, bread and milk. These foods are always prescribed as part of a pregnant woman's diet. Eating them protects not only the mother but the child as well, who may suffer severely from the mother's deficiency in thiamine. All of these are part of the vitamin B complex.

Doctors believe that a shortage of riboflavin—which is plentiful in milk, cheese, eggs, liver, meats, and green leafy vegetables—can cause sterility, death of the foetus, and malformation of the infant. Hence, they prescribe the above food to all pregnant women.

Niacin is part of all living cells, thus it is especially important during pregnancy when such cells are being created in great numbers. It is found in most of the foods containing riboflavin and thiamine.

Many women are anaemic during pregnancy, due to the lack of iron in their diets. Liver, eggs, fruit, whole grain, and enriched cereals are good sources of iron. If the pregnant woman is not getting enough iron from her food, especially during the last 4½ months of pregnancy, her doctor may prescribe iron salts, folic acid, vitamin B<sub>12</sub>, or liver extract.

Lack of iodine, a substance which influences the rate of metabolism in the entire body, causes an enlarged thyroid gland, goitre, and,



ultimately, cretinism (birth and development of a dwarfed, misshaped individual with retarded intelligence or idiocy). Women are made less fertile by lack of iodine; and the children of goitrous mothers become increasingly susceptible to goitre and cretinism with each succeeding birth.

There is no need for any mother-to-be to be deficient in iodine, or in any of the essential nutrients discussed in this chapter. Iodine is found in sea-foods and in foods grown in areas reached by prevailing sea winds. It is also found in iodized table salt, and now, thanks to the Ministry of Health, all table salt is iodized.

## 28. *What to Eat while Pregnant*

THE first rule, as we have said, is not to eat beyond the normal diet for the first four months. There are only two "musts" during this period:

1. The pregnant woman *must* drink at least one quart of milk each day. Or her doctor must prescribe an adequate substitute.
2. She *must* eat at least one egg daily.

The milk that the pregnant woman drinks is best if it is vitamin D enriched. However, she may take her choice of fluid whole milk, skimmed milk, butter milk, evaporated milk, dried whole milk, or dried skimmed milk. And the milk need not be taken straight, but may be used in milk soups, desserts, cereals, milk drinks, or in other foods.

Incidentally, while it is true that the foetus will take necessary growing materials from the mother's body even though it means the mother is being deprived of these nutrients, this regulatory mechanism is not completely automatic. As we have seen, when the mother eats poorly the infant fares poorly too.

The daily egg is important to an expectant mother as a source of iron, fighting any tendency towards anaemia in the mother. It is also an excellent source of vitamin A, thiamine, and riboflavin.

After the fourth month, it is absolutely essential that the woman who is carrying a child should eat certain other foods every day. Also, from this point of view, she may increase her total intake by about 20 per cent above normal.

A sample day's menu for the pregnant woman in her early months could run as follows:

### *Breakfast*

- 1 cup citrus fruit juice, *or* 1 serving of citrus fruit
- 1 cup of ready-to-eat breakfast cereal
- 1 glass of milk
- 1 egg
- 1 slice of whole-grain or enriched toast ( $\frac{1}{2}$  in. thick)
- 1 teaspoon of butter or enriched margarine
- Beverage

### *"Elevenses"*

- 1 glass of milk

### *Lunch or Supper*

- 1 serving spaghetti cheese, *or* 1 cup of split-pea soup
- Grated carrot and lettuce salad
- 1 or 2 slices whole-wheat or enriched bread ( $\frac{1}{2}$  in. thick)
- 1 teaspoon butter or fortified margarine.
- Fruit—fresh, tinned, or dried
- 1 glass milk

### *Dinner*

- 1 serving meat, fish, or poultry ( $\frac{1}{4}$  lb.)
- 1 baked potato
- 1 tablespoon butter or fortified margarine
- $\frac{1}{2}$  cup cooked green-leaf vegetable
- 1 slice whole-wheat or enriched bread ( $\frac{1}{2}$  in. thick)
- Baked custard, ice-cream, or other simple dessert

It will be noticed that the food is both ample and simple. Too many gravies, fried foods and other foods rich in fat may upset the digestion. Also, they tend to increase weight too rapidly.

Fish-liver oil—as prescribed by the doctor—should be taken at some time during the day.

### *Additional Foods after the Fifth Month of Pregnancy*

Additions to the diet will be necessary after the fifth month of pregnancy, but such additions should never be overdone. Here are some suggestions:

- 1 extra slice of wholemeal or enriched bread and butter at



breakfast and lunch; or wholemeal biscuits and butter, or a serving of cereal added to the mid-morning glass of milk.

1 extra serving of meat, fish, cheese, eggs, or dried peas or beans.

1 serving of fruit for dinner or as a mid-afternoon snack.

1 extra serving of fruit or vegetable salad with dressing.

1 extra serving of vegetables with butter or margarine.

## *28. Your Food and your Teeth*

CAVITIES—decayed teeth—are the major public health problem in modern dentistry. There is no doubt that many cavities are caused by bad diet—including the water we drink. And the reverse is equally true—that a generally good diet, combining a variety of animal and plant foods to provide the needed amounts of all dietary essentials throughout life, will protect against tooth decay.

There is complete agreement among authorities that tooth decay is caused by bacteria. There are two types: (1) the acid-producing bacteria which change fermentable carbohydrates into acids in the mouth, which, in turn, dissolve calcium from the tooth enamel, leaving the tooth open to attack and destruction by other bacteria; and (2) protein-attacking bacteria which destroy organic matter in the tooth structure by acting upon the intact or previously decalcified tooth.

Now, nobody knows why these bacteria attack some teeth but not others. There are many theories about this, but there is sound evidence that suggests that some—not all—cavities in teeth are related to diet.

For example, population studies comparing the dental problems in various African tribes found less caries (cavities) in those groups which lived mainly on cereals with some roots and fruits. When these tribes were exposed to civilized, refined foods, they developed more cavities than they had had on their natural foods.

In different areas of Norway there are wide variations in the percentage of cavities. People who had fewer cavities ate such foods as sour milk, butter, wholemeal bread, berries and little meat, sugar, or delicacies; those who developed more cavities ate less milk, butter, and wholemeal bread, and more refined flour and sugar.

During the war, shortages of many foods caused rationing, which

in turn affected the diet. Basic foods were available in limited amounts, but many refined foods were not. Under these restrictions there was actually less dental caries. The explanation seems to be that expectant mothers and their children actually benefited, dentally, from the restricted diet. Children born under these conditions actually had fewer cavities for several years after the war ended, which medical authorities interpret as the result of better, more resistant tooth structures.

There is also good reason to believe that hard water or fluorine in water or food lowers the amount of tooth decay in population groups.

But the best news and the most hope about the importance of diet in helping human beings to resist tooth decay comes from dietary studies. These studies have shown that, even if we do not know exactly what causes tooth decay, we can stop decay and prevent new cavities by a well-balanced diet. It does not seem to matter how much sugar or starch is included in the diet, so long as it is balanced. The protective foods used to make sure that the children taking part in the studies obtained a proper balance of nutrients were: milk, cream, butter, eggs, meats, vegetables, fruits, and cod-liver oil.

The two most important and basic constituents of tooth enamel are calcium and phosphorus; and utilization of these two tooth-builders depends on the vitamin D in one's diet. Since calcium and vitamin D are found in homogenized milk, this is one good way of obtaining the two together. However, it is not necessary to drink vitamin D if your skin is exposed to sunlight every day (not necessarily in a bathing suit—just a small amount of skin exposure will do). Then you can drink plain milk or any other kind of milk or milk product to obtain your calcium.

The number of cavities a child will have in his or her teeth depends on the kind of food his mother eats even before the child is conceived. If the mother does not eat a well-balanced diet before she becomes pregnant, her unborn baby will feel the effects. Dr Dorothea Radusch, Professor at the University of Minnesota's School of Dentistry, says: "The quality and resistance of teeth is markedly influenced by the diet consumed by the pregnant mother." Prenatal factors in tooth growth, says Dr Radusch, are more important than anything that happens after birth.

The reason is that the baby's teeth start hardening by the fourth week in the life of the foetus. In order for this to happen, the tooth buds must be formed even before the fourth week. Even most of the



buds of the permanent teeth, those that we all carry with us through life, are formed in the foetus.

The mother's diet is the only source of the necessary calcium and other nutrients which go into forming the child's teeth and bones. The foetus will draw some of its needs from the mother's own body, but not all. The mother's diet must be sound.

If the mother's diet is not adequate, the child's teeth will be poor from the very beginning. And they will be hurt by another circumstance. Children born of mothers who have poor diets have low resistance to the illnesses which beset any infant. As a result, they become ill more often during the period when their baby teeth and their permanent teeth are developing. Two-thirds of the pitting and irregular formation of enamel on permanent teeth occurs in the period just after birth until the age of ten months. This damage is not visible until the child develops permanent teeth between the ages of six and twelve years.

## *29. Special Diets help Combat Specific Diseases*

As a nation, our nutritional health is improving all the time. Manufacturers of our daily foods have been convinced by doctors that it is to their advantage to enrich their products. In some districts fluorine is added to the water supply to control dental caries.

There are probably cases of vitamin deficiency, but few are acute enough to necessitate hospital treatment. There is still a great deal of mild anaemia, due to iron deficiency. This type of anaemia is found mostly in children and in pregnant women, although it can occur in anyone. A diet rich in iron is the answer to this problem, and in some cases this must be supplemented by iron concentrates.

The fact that there is still much secondary anaemia shows that a certain proportion of our population has yet to learn about balanced diets.

Two major diseases that can be controlled to some extent through diet are diabetes and high blood pressure. A less common disease in which diet plays a large part is gout. Diet is also used in treating ulcers, colitis, and many other diseases.

Without going into the etiology, or causes, of these diseases, it is important for everybody to know that sugar plays an important role in diabetes; in hypertension the health of many patients is affected

by the presence or absence of sodium in their food; and in gout the dangerous element is a nutrient known as purine.

Knowing these things, doctors have prepared special diets which limit drastically the intake of the upsetting element.

Diabetes is a disease of metabolism, and it varies in degree of intensity with each patient. Hence, there is no single diet for diabetics. Every diabetic must literally weigh carefully the various foods he eats. This weight is prescribed for him by his doctor. Each diabetic has a different food allowance. However, the Diabetic Association has devised a set of interchangeable foods so that the diabetic may have a varied and interesting diet while staying within his carbohydrate allowance. Starting with the allowed amounts of various kinds of food, the diabetic can vary his diet to suit his palate by using the food exchange lists.

Hypertension (high blood pressure) and oedema are treated with diets. In high blood pressure it is vital to reduce total body weight. This can be accomplished through lowering the bodily intake of calories.

But the key ingredient withdrawn from the diets of hypertension patients is sodium. This is a common mineral, forming about 40 per cent of the molecule of ordinary table salt, and also found in quantity in most baking powders, baking soda, and many other materials used in processing or preparing food. Red meat, contrary to old superstition, has no influence on blood pressure—unless too much of it (or any other food) is eaten. Overeating is dangerous in all heart diseases, simply because excess weight puts a heavier burden on the heart and blood vessels. "The man who should weigh about 170 lb.," says the American Heart Association, "but actually weighs 190 is carrying a 20-lb. burden wherever he goes. His heart and blood vessels must work that much harder."

Another kind of physical strain is put on the heart by excess pounds. A normal human heart pumps blood at the rate of about 70 times a minute, 100,800 times a day, and 2,575,440,000 times in a life span of seventy years. Each time it beats, it drives blood through blood vessels having a total combined length of 100,000 miles. For each extra 5 lb. of fat, 3 miles of blood vessels are necessary. This adds a billion miles of extra pumping to the heart's work (providing the overweight person lives a full seventy years).

It is also true that overweight people frequently have fatty deposits on the inside of the walls of their blood vessels. This fatty accumulation has been compared with rust in old pipes: when enough



accumulates, the pipe bursts. When a blood vessel bursts, the patient has a stroke or a heart attack, resulting in paralysis or death.

Fatty deposits are composed of cholesterol, a kind of fat found in many foods. One would think, therefore, that reducing the amount of cholesterol in the foods consumed by people with artery disease (arteriosclerosis) would avoid these fatty deposits in the blood vessels. But even on a low-cholesterol diet, the amount of cholesterol in the blood does not change appreciably. So, say the scientists, the best diet for the person with arteriosclerosis is no fad diet, but a good basic nutritional intake—meat, milk, eggs, vegetables, cereals, fruit—with enough calories to maintain desired weight.

There are no foods that produce cancer. There are some substances which help to produce cancers experimentally, and it is known that certain irritants such as coal tar and excessive sunlight seem to produce cancers; but none of these is a food.

However, many experiments are being carried out to determine the relationship between diet and cancer—whether cancers develop more readily when certain foods are eaten, or whether the growth of cancers can be slowed down or stopped by diet.

So far, no cancer facts applicable to your daily diet have been found. There are no foods to omit; nor are there any that can be recommended as preventing or helping to cure cancer.

## PART SEVEN

### QUESTIONS AND ANSWERS

#### 30. *Key Questions and Answers about Dieting*

1. *Should I eat reducing foods—as, for example, a certain bread advertised for reducing?*

A. The following analysis compares one slice of white enriched bread with one slice of so-called “reducing” bread:

Portion	Ounces	Calories
White enriched bread, 1 slice	$\frac{1}{2}$	35-39
“Reducing” bread, 1 slice	$\frac{1}{2}$	29

Ounce for ounce, the “reducing” bread saves from 5 to 10 calories per slice. Therefore, to call it reducing on the basis of its calorie saving is impractical. Since it has no other effect on your weight, it cannot properly be considered a necessary, or even helpful, part of reducing.

2. *How about other reducing foods?*

A. No food is in itself reducing. All foods have calories—with the exception of black coffee, tea without milk, water, saccharin, and fat-free clear soup. You cannot exist solely on low-calorie foods; you would become weak and ill if you tried. What you can do is eat a balanced diet of all foods, but not overdoing the high-caloried items, and eating more of the low-calorie foods.

3. *Are “health foods” valuable?*

A. Almost every food is a health food if it is part of a diet which includes the necessary nutrients. No particular food is essential—only certain types of food because they contain necessary nutrients, which are less available in other foods.

4. *Do I need vitamin pills when I diet?*

A. On a well-balanced reducing diet, you need no vitamin pills; on a well-balanced regular diet you certainly do not need any. Vitamins are found in food. Eat enough of the basic foods suggested in our diet and you will never need synthetic vitamins,



except during pregnancy or disease. Remember, most vitamins are not stored in the body but must be eaten every day.

5. *Can vitamins or minerals prevent greying of my hair?*

A. There is no permanent effect of prevention of grey hair in human beings through the use of vitamin E, calcium pantothenate, or other substances. Any statements you have read to the contrary are based only on limited experiments, most of which have been performed on animals. Very often the results of animal experiments are not the same as the results in human beings.

6. *Do vitamin concentrates have calories?*

A. No.

7. *Is it safe to use saccharin instead of sugar?*

A. Yes. Saccharin is a white crystalline substance which sweetens food without adding calories, is unchanged in digestion, and not harmful except in extremely large doses.

8. *How long should I use saccharin?*

A. Although saccharin is not harmful, there is no reason to continue to use it beyond the reducing period. Once you have reached your desired weight, there is no necessity for an artificial sweetener, since your calorie allowance will easily include sugar.

9. *Is water fattening?*

A. Water has no calories, therefore no fuel value, so that body fat cannot result from drinking water. Drinking large quantities of water may cause you to show a temporary weight gain, but cutting down on salt should tend to get rid of this. Further, a minimum of 6 to 8 glasses of water a day (including the water in soup, coffee, milk, etc.) is necessary to help you lose weight through eliminating the waste products of your body.

10. *Is drinking water with meals harmful?*

A. Water taken with meals is not objectionable provided it is not used to "wash down" food—thus diluting digestive juices in the mouth and stomach, and forcing half-chewed food to be swallowed. Some people find that drinking water with meals stimulates their appetite; others that it tends to fill them more quickly at meal times. Depending upon how it affects you, and whether you want to gain or reduce, you can decide for yourself about drinking water with meals.

11. *Should I cut down salt when dieting?*

A. Salt does not add to your fat and cutting out salt will not help you get rid of fat. However, in reducing, tissues sometimes tend to retain too much moisture which, when you cut down on salt, will disappear. This can have an effect on your total weight.

12. *Is mineral oil a useful help in reducing?*

A. Definitely not. Mineral oil is a laxative with no food value, but it is definitely harmful to health in this way: Vitamin A is soluble in fats and oils; when you take mineral oil, you remove all vitamin A, you do not utilize vitamin D as you should, nor do you retain the calcium and phosphorus in your food; and you interfere with the absorption of vitamin K.

13. *May I use mineral oil in salad dressing?*

A. It is not advisable. Diet specialists are attempting to curb the use of mineral oil in the preparation of commercial food products. If your diet does not contain enough roughage to regulate your bowels, see your doctor. But never use self-prescribed mineral oil.

14. *Is it in order for an underweight person to smoke?*

A. As far as eating is concerned, there is no objection to smoking in moderation. However, for the underweight person, there is a definite connection between smoking and lack of appetite. Studies show that excessive smokers who were underweight all had poor appetites. Their appetites definitely improved when they stopped smoking; and their weight went up. But the reverse is not necessarily true.

15. *Won't a black coffee and a cigarette for lunch help me to reduce?*

A. It certainly will—it will help to reduce your weight, your health, and your looks—unless you back it up with the right kind and amount of food eaten at other times. Even if you eat half a dozen plain biscuits at the same time, you will only be receiving 141 calories. No active person can manage on a 141-calorie lunch, even of healthy food—it just isn't enough to carry you through the afternoon without fatigue and loss of efficiency.

16. *Are soft drinks to be recommended?*

A. If you have calories to spare, and wish to squander them on soft drinks—after, of course, you have eaten your full quota of minerals, vitamins, and protein—there is nothing to stop you.



But remember you are obtaining nothing but calories—in the form of sugar. It would be better for your health to drink a pure fruit juice, which not only quenches your thirst and contains sugar, but is rich in vitamins and minerals as well.

17. *How does toasting affect the calories and vitamins in bread?*  
A. Calories are unchanged by toasting, except if the bread is burned. In whole-wheat or enriched bread there is a slight loss of thiamine (Vitamin B<sub>1</sub>) and of moisture. However, the losses are so slight they need not deter you from eating toasted bread.
18. *Is cold food as nutritious as hot food?*  
A. In some cases, as in raw vegetables, oysters, etc., cold uncooked food is more nutritious than the same food is when cooked. Cold foods are as nutritious as hot foods. However, cold or hot *cooked* foods are generally easier to digest and contain less roughage, and most of us are conditioned to the warmth in food to start digestive and eliminative processes moving.
19. *Is eating too many eggs harmful?*  
A. No more so than eating too much of anything. Moderation is a good guide in all eating, and our one-egg-a-day allowance provides valuable minerals, vitamins, and protein. However, if meat is scarce, eggs are a good substitute, and most doctors believe that there is no reason why two or three cannot be eaten daily by a normal adult.
20. *Should food be chewed until you cannot taste it before it is swallowed?*  
A. Definitely no. Food should be chewed to take the lumps out of it, because your stomach has no way of reducing the lumps except through the action of its juices. Too much chewing breaks down the roughage in your food which is necessary to move the food along in your digestive tract.
21. *In choosing foods, what about balancing acid foods with alkaline foods?*  
A. No foods are entirely acid—as some people think is the case with citrus fruits and tomatoes—or entirely alkaline. Certain foods are acid-forming, however, and others are alkali-forming. Eating a sufficient foundation of the protective foods, and a correct amount of others such as starches, sugars, and fats, will provide a proper balance of the two types of foods.

22. *Which foods are acid-forming, which alkali-forming?*

A. Acid-forming foods are meat, fish, poultry, eggs, and cereals; alkali-forming foods are vegetables, nuts, fruits (except prunes, plums, and cranberries), and milk.

23. *Is it possible to omit food from any of the seven basic food groups, and still obtain all dietary essentials?*

A. Yes, but that is doing it the hard way. For example, if you omit all green, leafy vegetables, extra amounts of the following foods should be taken to make up for lack of vitamins A and C and iron:

Butter or margarine

Whole milk or cheese

Potatoes, dried peas, or beans

Citrus fruit or tomatoes.

24. *Is it harmful to eat before bedtime?*

A. Calories in food are the same, day and night. However, a hearty meal taken just before going to bed is more likely to become stored as fat than if it were taken earlier or at midday, when the body has a better chance to work it off in some form of activity. Also, too much food before retiring, or too rich food, may cause stomach upsets and interfere with sleep. Good pre-bedtime snacks which add minerals and vitamins to your system are fruit, fruit drinks, and milk.

25. *What causes indigestion?*

A. Practically all foods are digestible if thoroughly chewed and taken in reasonable amounts. But eating too quickly, eating when under a strain or when fatigued, failing to chew food thoroughly, or eating too much rich food are the most common causes of indigestion.

26. *How do I cure indigestion?*

A. Try resting before meals, or consciously relaxing. Eating well-prepared foods (leave out the rich gravies and sauces, the heavy condiments, and fried foods for a while) in pleasant, calm surroundings with happy conversation or music as an accompaniment is helpful. If your indigestion persists in spite of these safeguards, see a doctor.

27. *Are iced drinks harmful?*

A. There is no complete agreement on this. Some authorities claim that iced drinks retard, more or less, the digestion. Too many



iced drinks are certainly harmful and will probably bring on cramps.

28. *Does my stomach shrink when I eat smaller portions of food?*

A. No. Popular belief that the stomachs of lean people are shrunken is incorrect. X-rays show that thin people have stomachs of normal size or even slightly larger than normal. They don't eat, usually, because they don't exercise, are finicky about choosing foods, usually avoid fatty foods and sweets, and never eat a big meal, even when hungry, because they are satisfied with less food.

29. *How do I know I am overweight?*

A. A good question. The weight chart tells you the average for your age and height. But notice the wide variation for different body builds at the same height. Perhaps your build—wide hips, wide shoulders, short legs—demands extra pounds for proper coverage. One good test is to lie down on your back and see if your stomach falls below your rib bones—if it does not, you are probably carrying a fat tyre round your middle that you do not need.

30. *I eat scarcely anything, but I am overweight. Why?*

A. Frequently, in attempts to eat "scarcely anything", we may choose what seems to be a small meal—for example, a sandwich and an ice-cream with fruit. Actually this meal totals 600 to 700 calories. On the other hand, a full meal of tomato juice, a small vegetable salad with a tablespoon of French dressing, a glass of milk and a small serving of mixed fruit adds up to only about 300 to 400 calories. In other words, eating small quantities of food is not the measure of the pounds food can put on you.

31. *I watch my meals, but still I continue to gain. Why?*

A. How about between meals? Often small eaters are big nibblers. Do you count everything you eat when you say you watch your meals? Do you count the biscuits and sweets and cakes and everything else you eat at odd times and before going to bed? Careful investigations continue to show that loss in weight is determined over long periods mainly by the amount of calories one eats in relation to the energy one burns—you only lose weight when you eat fewer total calories than you burn up in activity each day.



## APPENDIX

THE vitamins and minerals in the foods you buy and cook depend, to a large extent, on how fresh your vegetables are when you buy them (tinned and frozen vegetables are considered to be the equivalent of the freshest unprocessed products, in most instances) and how you store them and cook them.

A study made by one group of dietitians showed that many families lost much valuable vitamin and mineral content in cooking and storing foods, and that this had a definitely bad effect on the health of each member of these families. Merely changing to proper kitchen methods measurably improved the health of both adults and children.

Here are recommendations for proper storage and cooking of all types of food to obtain the most flavour, the least waste, and the most health for your money:

### STORE PERISHABLE FOODS PROPERLY

#### *Vegetables, Fresh*

With the exception of potatoes, onions, parsnips, artichokes, all vegetables should be put in a refrigerator, when possible, immediately after purchasing—or be taken from the garden. Wilting on exposure to air and light causes a great loss of essential nutrients.

Carefully wash and clean vegetables. Dirt may contaminate them and hasten spoilage. Drain off excess water, but store while still damp, in order that they may become crisp.

Trim away bruised or spoiled spots to prevent rapid spoilage. Cut off carrot tops, but do not peel.

Peas and broad beans retain more vitamins if kept in the pod. If they must be shelled in advance, store in tightly covered jar, and place in a refrigerator.

Do not peel or cut up vegetables before storing.

All leafy vegetables, broccoli, cauliflower, beans, carrots, celery, onions, radishes, and cucumbers should be kept in moisture- and vapour-proof wrapping such as cellophane bags.



Do not buy more vegetables at one time than you need or can keep in a refrigerator.

Do not place vegetables in the food compartment of a refrigerator without covering.

### *Vegetables, Frozen*

Do not buy more frozen vegetables, or frozen foods of any kind, than you actually need for immediate consumption. Frozen food may be kept for a short while in the freezing compartment of a refrigerator, but *only* in the freezing compartment.

### *Fruit*

Tomatoes, berries, grapes, pears, peaches, apricots, and plums may be stored on open shelves of a refrigerator, without covering.

Berries keep better if they have some air circulation. Spread them out on a pan or dish. Do not wash or stem before storing. Do not store bananas in your refrigerator.

### *Meat, Fish, Poultry*

Remove meat from original wrappings before storing. Many layers of paper serve as insulation and prevent the cold from reaching the meat. Paper also absorbs valuable meat juices, and may contaminate meat if not perfectly clean.

Meat needs a low temperature for safe keeping. If your refrigerator has no covered, ventilated meat compartment, place unwrapped meat on a dish, cover lightly with grease-proof paper, and store directly beneath the freezing compartment.

Minced meat and cooked meats are extremely perishable. Use promptly. Minced meats keep better if stored in ice tray in freezing compartment.

Cooked or lightly cured hams and bacons are almost as perishable as fresh meat. Be sure to place them in the refrigerator promptly.

Wrap fish in grease-proof paper if you must store it with other foods. Use promptly. Fish is also perishable.

Poultry keeps longer if thoroughly cleaned and drawn before storing. Do not cut into pieces, however, if you do not intend to use them promptly.

### *Milk*

Store milk in the refrigerator as soon as it is delivered. Milk should be kept in the lowest possible temperature. The best position in the refrigerator is next to the freezing unit.

Keep milk out of the light. Light is destructive to riboflavin and milk is one of the best sources of this essential vitamin.

Do not mix old and new milk for drinking. Reserve the older milk for cooking.

Always wipe the tops of milk bottles with a clean, damp cloth before pouring from the bottle. Reseal the bottle if any milk is left, and return to the refrigerator.

Unopened tins of condensed or evaporated milk need not be kept in the refrigerator, but be sure to keep any *opened* tins in the refrigerator.

### *Milk and Egg Dishes*

Any cooked dishes made of eggs and milk should be chilled immediately by placing in the refrigerator whilst still hot: for example, custards, salad dressings, etc. Such dishes are the one exception to cooking foods before storing.

### *Eggs*

Eggs keep fresh longer if stored in a covered container. Place in the salad compartment of the refrigerator if possible. The shell of the egg is porous and, therefore, the egg evaporates rapidly.

## PREPARE FOODS CAREFULLY TO PROTECT FOOD VALUE

### *Fruits and Vegetables*

Do not peel fruits or vegetables until just before you are ready to use them. Part of their vitamin content may be destroyed by exposure to air.

If your family enjoys potatoes, carrots, etc., cooked with the skin on, serve them that way occasionally. If you do peel them, do so as thinly as possible. Valuable vitamins and minerals are near the skin.

Never allow peeled fruits and vegetables to soak in water. Nutrients which are soluble in water may be lost.

Use your refrigerator to keep salads and greens crisp.

Do not shred cabbage or salad greens until just before serving. Much of their vitamin C content might be lost.

If you must prepare salads some time before serving them, wrap them loosely in a clean, wet towel and store in the refrigerator.

Fresh peas and broad beans lose vitamin content when they are shelled. Therefore, do not shell them until you are ready to cook



them. If last-minute preparation is quite impossible, store in the refrigerator in a tightly covered jar. Wash the pods before shelling, rather than the peas or beans themselves.

Avoid bruising soft fruits. Bruises not only mean more rapid deterioration but also hasten loss of vitamin C.

Do not stem or wash berries until you are ready to serve them.

Do not cut oranges or grapefruit until just before serving time. If you have an odd half of a grapefruit left over, wrap in grease-proof paper and store in your refrigerator.

Do not squeeze orange juice in advance of serving time.

### *Left-overs*

Cooked vegetables lose part of their essential food value through reheating. Try not to overestimate the amount of vegetables your family will consume at one meal. They will receive greater value from vegetables if a fresh supply is cooked for each meal.

All left-overs should be covered and kept in the refrigerator.

## COOK TO CONSERVE FOOD VALUE

Scientific research has definitely proved that an appalling amount of the precious vitamins in vegetables can be lost through improper cooking methods. To safeguard these vitamins—

### *Follow These Four Cooking Rules*

1. *Use little or no water.* As a guide, use the minimum amount of water that will cook the food without sticking. By avoiding excessive amounts of cooking liquids the dissolving and loss of water-soluble vitamins and minerals is kept to a minimum.

2. *Start fast—cook quickly.* Total cooking time is greatly reduced by bringing the foods to a cooking temperature quickly. This protects vitamins in foods by keeping to a minimum the time they are exposed to water, heat, and air.

3. *Avoid violent boiling.* After the food begins to boil, reduce the heat to the lowest temperature required to maintain simmering. Avoid violent boiling to keep vegetables whole and decrease the loss of water-soluble substances.

4. *Cook in covered utensils—without stirring.* Stirring puts extra air in food and destroys certain vitamins. Cooking green vegetables in covered utensils keeps the natural colour and flavouring if the vegetables are not overcooked.

### *How to Cook Frozen Vegetables*

Do not thaw frozen vegetables before cooking. Once thawed they lose vitamins rapidly.

When cooking, break the frozen vegetables into about four sections. Place in utensil. Add not more than  $\frac{1}{4}$  cup of water, less than this amount if you can. Less water need be added if you add butter, or other fat used for seasoning, at the start. Cover. Proceed as for fresh vegetables.

Remember that frozen vegetables were partially cooked before freezing. *Do not overcook them.* It requires 12 minutes, or less, for cooking most frozen vegetables.

### *Other Suggestions for Cooking Vegetables*

Serve all the cooking liquid with the vegetable if you can possibly do so. If there is too much, use for making gravies or soup. Excess water from cooked potatoes may be used in mashing potatoes. *Never throw the cooking liquid away—it contains valuable vitamins and minerals.*

Serve vegetables *raw* frequently.

*Never add soda to vegetables to preserve their colour.* Soda is alkaline and helps destroy certain vitamins. Vegetables retain their natural colour if they are not overcooked.

*Never overcook vegetables of any kind.* Overcooking is very destructive of vitamins and minerals. They not only retain more of their food value, but also have a more attractive appearance and flavour if they are served while they are still firm and colourful.

## PROPER COOKING UTENSILS ARE IMPORTANT

Protective cooking can be done on almost any kind of cooker. You will get better results, however, if your cooking utensils meet the following requirements:

*Flat bottoms* which fit the heating unit are most efficient. This means that all heat is applied directly to the bottom of the utensil.

*Straight sides.* Utensils with straight sides are best because they utilize heat to better advantage. Also they require less water for cooking vegetables.

*Tight covers* which retain steam are essential when using minimum water. Otherwise vegetables will quickly boil dry and stick or scorch.



Examine your supply of utensils. Perhaps a sandwich tin will substitute for a loose saucepan lid. When the time comes to replace utensils, keep the above specifications in mind.

## COOKING MILK AND MILK PRODUCTS

### *Things to Remember*

1. Cook milk in covered containers to retain riboflavin (vitamin B<sub>2</sub>). Milk is our most important source of riboflavin and this vitamin is easily destroyed by exposure to light.

2. Cook milk or cheese at low temperature to prevent curdling or scorching.

3. Grate or dice cheese so that it will melt quickly. Add to sauces just before removing from the heat. Too much heat makes cheese tough and stringy.

4. Use a double saucepan in cooking milk or cheese, unless your stove provides even, controlled heat which can be turned very low.

5. All milk and egg dishes which are to be baked should be set in a pan of water. Use enough water to come halfway up the outside of the baking dish.

## COOKING MEAT

There are two chief methods of cooking meat: (1) By Dry Heat. (2) By Moist Heat.

### *(1) By Dry Heat*

Roasting, grilling, or frying: used for tender cuts of meat containing little connective tissue, and for minced meats in which connective tissue has been automatically softened and tenderized.

*Roasting.* 1. Cook at moderately low temperature—300° to 350°—to retain natural juices and prevent shrinkage and charring. Less shrinkage means more serving per joint. Prevention of charring helps retain thiamine.

2. Use shallow, *uncovered* roasting pan.

3. Do not sear meat or add water. Do not cover.

4. Place joint fat-side up. Melting fat makes basting unnecessary.

*Frying.* 1. Use a heavy frying pan. Preheat. Rub with fat *only* if meat is very lean or you are cooking minced meat.

2. Brown meat on both sides at moderate temperature. Reduce

temperature. Continue cooking. Turn as often as necessary to ensure even cooking. Always avoid high temperatures.

3. Pour off excess fat as it accumulates in the pan.

*Grilling.* Trim excess fat from meat. Score edges in several places to prevent curling. For best grilling results, see that meat is 2 to 3 inches away from the heat. Slow grilling is best because it cooks the meat uniformly and there is less shrinkage, charring, or smoking. Meats less than one inch thick should be fried rather than grilled.

## (2) *By Moist Heat*

Braising, stewing, pot-roasting: used for less tender cuts of meat containing considerable amount of connective tissue.

*Heating by moist heat.* 1. If meat is to be browned first, brown it evenly on all sides in an uncovered heavy saucepan. Use *moderate* heat.

2. When water is added, reduce temperature. Continue cooking *below boiling point* in covered utensil until meat is tender.

3. If vegetables are included, allow just enough time before meat is finished to cook them.





# KEEP AN INVENTORY

FIRST DAY OF DIET\_\_\_\_\_

	WEIGHT	LOSS	GAIN
BEGINNING OF DIET			
END OF 1st WEEK			
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.. .. 3rd ..			
.. .. 4th ..			
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